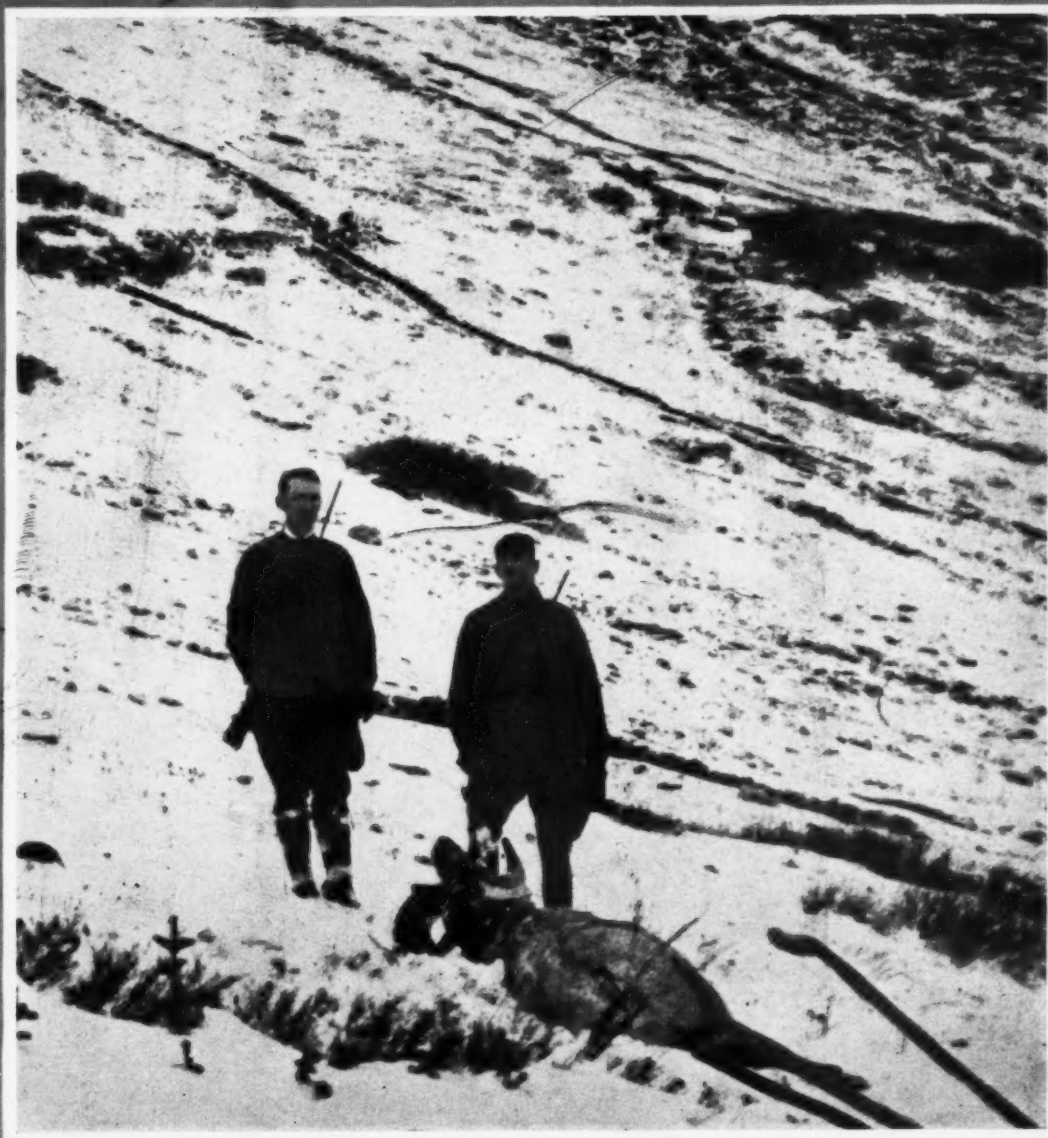


The AMERICAN RIFLEMAN



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MARCH, 1929

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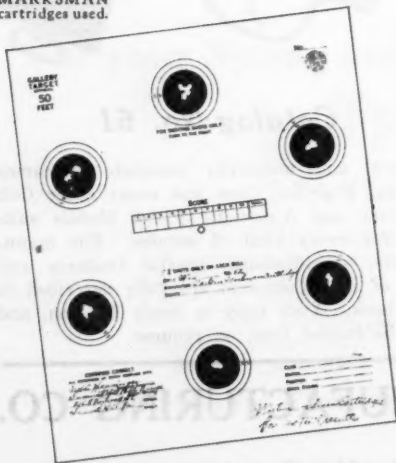
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EDITORIAL

A "Big" Newspaper Makes A Discovery

THERE is a world of difference between a "big" newspaper and a "great" newspaper. The amount of circulation decides whether a newspaper is "big" or not. The brains of the editor decide whether a newspaper is "great" or not. We have both kinds in this country. In a position to claim first honors as a "big" newspaper is *The Chicago-American*. Using the test of the brains of the editor as a criterion, there seems to be no hope of this particular newspaper laying claim to the title "great."

The Chicago-American has recently made a discovery which will come as a distinct surprise to the honest citizens of Chicago and the entire population of the United States. This discovery is that a lot of promiscuous shooting is being done by organized gangsters in the State of Illinois. *The Chicago-American* has discovered, first, that if you know the ropes you can buy a pistol, revolver or machine-gun in Chicago without a permit. Second, that you can buy a shotgun for twelve dollars, a hack-saw for fifty cents, and a box of shells for a dollar, and that with this combination you can create a bandit weapon far more murderous than any pistol or revolver. Third, that the only real solution to the crime wave in Chicago is to have Congress adopt a Federal law which will bring the manufacture and sale of all firearms directly under the control of the Government, in the same way that intoxicating liquors were brought under the control of the Government by the Volstead Act and the Eighteenth Amendment.

Among the interesting facts published by this "big" newspaper is the disclosure that at least one of the reporters talked to a man whom the reporter *knew* to be a gangster, and the gangster talked back because *he knew the reporter*. From this it may be presumed that it is a part of the job of a big newspaper such as *The Chicago-American* to have certain reporters who keep in intimate contact with the gangs and rackets, the interests of the public apparently being better served by making friends with the thugs than by turning them in to the police. This, of course, would be merely an assumption based on circumstantial evidence.

An interesting example of the manner in which *The Chicago-American* has developed its campaign against all guns is shown in the case of the fountain-pen type gun which the reporters discovered being sold in Chicago. They took one of these guns to Bill Purdy, who is well known throughout Illinois as an exponent of rifle and pistol shooting among civilians. The reporters asked Mr. Purdy what he thought of this gun. "Is such a gun deadly?" was the query. "Deadly? Why, boys, with this innocent little device I can snap a finger and blow your head off," Purdy is said to have declared. "There should be a law against even permitting the manufacture of such a contrivance, let alone selling it over the counter. As a matter of fact, there should be stricter supervision over the sale of all kinds of guns, and *The Chicago Evening American*, by stirring up that very question, is doing a great public service." Now, we are willing to concede that Purdy probably expressed himself forcibly about the fountain-pen type of pistol, as would any real shooter. If he made the last statement which *The Chicago Evening American* attributes to him, we must leave him to the fate of his friends in the Hamilton Club and on the firing line at Fort Sheridan. In their enthusiasm the reporters may, however, have stretched a point and added that last

sentence themselves. This incident, however, shows the methods followed by a "big" newspaper in trying to prove something of which the editor is already convinced.

Interviewing Acting Deputy Commissioner of Detectives John Egan, the newspaper discovered that "there were days when the robber and the footpad feared to carry a gun. They knew that the gun count in an indictment for robbery or burglary carried a stiff penitentiary sentence. They chose, particularly if they were men with criminal records, to rely on stealth for burglary and strong-arm methods for robbery, rather than take a chance on a gun." In other words, according to this expert on criminology, the thug will ply his trade, gun or no gun. Yet in the face of his own testimony Mr. Egan also told the reporters "anyone knows that robberies are committed *only with guns*." However, such self-contradictory testimony is nothing in the life of a "big" newspaper which has set out to prove something.

The reporters then interviewed Capt. William Schoemaker, in charge of detective bureau crime squads. There they discovered that "there are laws on the statute books which provide jail sentences of a year and fines up to three hundred dollars for carrying a pistol. Policemen bring these men with guns into court. The records show what happens. Continuances, bail, technicalities and wearing down of the prosecution and all too frequently on a day when the prosecuting witness is not in court, a demand for trial and a dismissal for want of prosecution." Then came, through Captain Schoemaker, the real remedy—"It should be illegal for a manufacturer to let a gun out of his factory except on consignment, except to legally constituted police heads in cities and towns or to sheriffs." Captain Schoemaker and *The Chicago-American* thereby made it clear just what would happen to members of the Organized Reserve, the Officers' Reserve Corps, the National Guard, the Regular Services, members of civilian rifle clubs or the several million red-blooded sportsmen who like to shoot in the field, on target ranges or at the traps.

We might timidly call the attention of *The Chicago-American* to the fact that in the testimony of Egan and of Schoemaker the real answer to the Chicago crime situation may be found. *Enforce the laws which are already on the statute books.* We might also respectfully inquire as to how much additional appropriation and how many additional Federal officers are to be required of Congress in order to supplement the Government agencies now engaged in enforcing the Volstead Act so as to permit them to similarly enforce the proposed Federal law against guns.

In this connection, the two enterprising youths who are making the startling disclosures for *The Chicago-American* have so far failed to discover the fact that it is very much easier to construct a bootleg gun than it is to manufacture bootleg liquor. We ask the editor of *The Chicago-American* not to hold this oversight against the records of his two young men, since it is so plainly apparent that neither he nor his reporters know very much about guns, their use or their manufacture anyhow.

We suggest to the editor of *The Chicago-American* that if he desires to take his newspaper out of the "big" class and get it into the "great" class, he should hire a couple of reporters from one of Chicago's really great newspapers and have a real investigation made as to the cause of crime in Chicago. Turn up the facts in regard to the present system of issuing permits in Cook County. Discover how many deputy sheriffs have been com- (Continued on page 28)

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Don't Do It!

By CAPT. J. G. W. DILLIN

DON'T wear deer-colored clothes in the woods while hunting deer. This is one of the several "don'ts" that should be branded deep into the minds of every person who shoulders a rifle with a view to an invasion of the forest in quest of the antlered monarch. I have just returned from my forty-third consecutive deer hunt, and have known of so many accidents and been witness to so many close calls that I feel justified in saying that every State wherein deer abounds should, by law, compel the wearing of a certain amount of color on the clothing.

Now just a few examples—just a few happenings: It was back in the year 1894 that I paid my first visit to the Canadian wilderness. Still hunting was the order of things. While deep in the woods with a compass as my only guide, a sense of intense loneliness came over me. I paused for a few minutes; my eyes became riveted upon a dense clump of ground hemlocks; then suddenly a flash of brown. My rifle came to my shoulder in an instant, but the brown had disappeared. Surely it was a deer. Just a few yards to the right I saw the tops of the bushes move. My finger again rested upon the trigger. I saw it, but this time it was not brown, but instead the ruddy features of a very famous hunter—my good friend. Here a strange feeling came over me—not the feeling of loneliness, but that of true fear—and as I thought it over, my thoughts were: Had I seen brown instead of flesh, I might have pulled the trigger. This event made such an impression upon my mind that my ingenuity was at once put into action. I must do something to prevent a recurrence. I soon had solved the problem—bright colors instead of somber to fill requirements. That night I sat by the camp fire and with needle and thread sewed two red handkerchiefs on my hat and clothes; and this to the utter astonishment of my several companions, who felt sure that my freakish act would scare all the deer far beyond rifle range. But this proved a false prophecy, for the next day brought my greatest success. I killed the biggest deer of my career—a splendid six-prong—the deer having stood back in the bush snorting in a most taunting manner. So much for the alibi; but still better things were to come, and here is the story:

A few days later I had wandered down into the lowlands where great thickets of aspen prevailed. There were many deer signs, and I was doing my best at still hunting. The small trees were so dense that I moved about with great difficulty. Suddenly a voice, "Hello!" I answered. "Come up!" exclaimed someone. I looked over on a knoll about 35 yards away and saw two hunters. Slowly I advanced. As I neared them one exclaimed, "Well, we have decided that your idea of wearing red in the bush is a good one. It in all probability has saved your life." "Why so?" I asked. Then with great emotion he spoke as follows: "I am a game warden. My friend and I came out here to look for deer. I didn't know there was a man in this entire section. We saw the tops of the aspens shake. Instantly both rifles were focused upon the spot; but to our great astonishment a flash of bright red caught our eyes, and down from shoulder came both guns. We gazed with amazement. 'A man!' exclaimed my friend. Yes; had we seen some other color, you more than likely would be a dead man at this moment."

With the addition of this experience I was fully convinced that a

display of red was not only practical as a precautionary measure against mistakes arising from hasty judgment, but will add that I was so firmly wedded to the theory that I preached the doctrine in all the hunting camps with which I came in contact. I also carried the idea down into Pennsylvania, where it spread like an epidemic. During the past thirty or more years I have noted several instances where red has played its part in the woods—instances where hunters in dense cover were thrilled with prospects of a shot at deer, but the red loomed up. It was seen in time; the thrill was gone, but a tragedy was possibly averted. I have in mind a striking instance where caution triumphed over anxiety, and doubtless prevented a serious affair. Briefly it was as follows:

We were making a short drive—two watchers and four drivers. As a watcher I stood at the foot of a bluff that was densely covered with young white oak. Dead leaves hung in such profusion that but a limited visibility was possible. I heard the drivers coming at nearly one-half mile beyond. Nothing to expect for at least ten minutes, if at all. But the unexpected came. Faint sounds from back in the shrub—something was moving slowly among the dry leaves, advancing cautiously, then a pause. Surely it must be a deer, for no person could possibly be at that point. Slowly but surely it was coming my way. A companion who held the next runway motioned for me to look out. He too had heard the footsteps and was convinced. At 50 yards ahead the tops of the bushes were quivering. A small patch of brown filled the opening between two saplings. A deer, surely. Instantly my sights rested upon that patch of brown, which remained motionless for what seemed an endless while. No; I did not pull the trigger, for I was not fully convinced. I had not seen a deer, so yielded to the doubt; and how thankful I was when, a moment later, the huge gray beard of a man was on full display a few feet in advance of the brown object. And it is in order to say that this rugged beard was the facial ornament of one of the drivers, who had quietly slipped ahead, hoping to get a shot to which he would not have been entitled.

Now, gentle reader, these stories are of events of long ago, and tell you of things that might have happened; but the worst is yet to come, for I will conclude by relating an experience of a very recent date. I will tell you of an instance where a warning was disregarded, the trigger pulled; then an inquest, a funeral, a widow and two daughters as mourners. Yes, this is all true; and briefly I will tell the sad story:

November 3, 1928, found our party located at a deserted lumber camp far up in the great North Woods. Our party comprised six members—five Canadians and the writer. I was not long in observing that a certain member of the party whom I will call Herbert was in my judgment carelessly attired. He was dressed in khaki from head to foot, with not a thread of bright colors visible on his entire make-up. I called his attention to this matter at the very outset, but with no success. He merely smiled. On the morning of the third day I sat beside him at the breakfast table, again advising him to make a change in his dress. I warned him in a most emphatic manner. "Don't do it!" I said. Again my warning

(Continued on page 15)

Riflemen's Dreams

By PAUL WALTER

SOMETIMES dreams, even dreams of very young riflemen, come true. And late in the fall of 1897, when I had reached the age of 17, I purchased from Kennedy Bros., sporting-goods dealers of Minneapolis, a .38-55 Winchester repeater, Model 1894, a set of Ideal reloading tools, a 10-pound (tin barrel) of powder, FFG black, several thousand primers, and, by a little scouting about, enough lead pipe and tin to shoot up the whole country, which was exactly what I had in mind.

I selected two congenial companions, older and wiser than I, and we chose for our base of operations the south shore of Lake Superior, near the mouth of the Black River, some 15 miles north of the small mining town of Bessemer, Mich. While not exactly virgin wilderness, this was in 1897 in many respects much the same as when the Indian tepee was the only sign of human intrusion. Except for one trapper and fisherman, whose cabin stood beside the mouth of the Black River where its then crystal flood joined that of Lake Superior, not a solitary settler's clearing marred the unbroken forest of cedar, hemlock, birch and pine, from Bessemer to the shores of the great lake.

It was near this spot that the three of us fell to with saw and ax; and in two weeks we had put up a very fine log cabin 16 x 20, with bunks and other furnishings. Winter was close at hand, and a few days more with saw and ax produced a wood pile that would provide fuel until spring. The winter's provisions were brought in and stored, and the prospect to me looked pleasing, for nothing remained to be done but enjoy ourselves at hunting, fishing, trapping, and, for my part, making medicine with powder, lead and reloading tools.

The woods all about our cabin were alive with deer. Runways ran in all directions, the ground resembling a sheep corral. Partridges strutted about everywhere. The cedar swamps were packed with snowshoe rabbits, for it was the seventh or maximum year of their multiplication. Plenty of fur-bearers were hunting and living off the rabbits and grouse, and a few gray wolves followed the deer herds and furnished our music as they ran the deer over the runways into the lake at night.

Rival trappers or Indians had stolen supplies and burnt out newcomers the year before, and it was therefore agreed among us that at least one of our party should always remain at home as camp-tender, his duties consisting also of cooking, washing, skinning out the fur, etc. The question as to who should act in this capacity for the first week was to be decided by the well-known method commonly called "freeze out," the one first losing his stack of 100 bullets to act as housewife for the following week.

This proposition pleased me immensely, for if there was one thing I could do (so I

Riflemen have many dreams. One of my dreams was that when I grew up to be a man I would own a fine rifle, a set of reloading tools, a pig of lead and a bushel of primers. With these and minor accessories I would explore the virgin wilderness until I should find the Ideal Sportsman's Paradise. There I would build myself a log cabin, and for the remainder of my life I would hunt, fish, trap and experiment with rifle, powder, bullets and tools, until I should learn the secret of how to send all bullets through the same hole. To shoot and reload until I was plumb tired and for once fed up on what ailed me—this was my dream!

thought) it was play poker. But after several weeks of steady industry as cook and camp-tender my enthusiasm waned. And each week, as we played our game to decide who was to be camp-boy for the following week, I noticed that, for some mysterious reason, those old boys did not display the least interest in my bet, when I had 'em, while, on the other hand, if I didn't have 'em, and was doing my best to make them believe I did, they invariably got interested in what I had, and wanted to see 'em!

Winter came with a big snowstorm, and after that, ideal hunting. Each morning I got up to kindle the fire, shivering until the cabin got warm, while my friends would lie in bed until breakfast was served, complimenting me upon my increasing skill as a housekeeper, but deploring my lack of poker sense. However, they said, since I was only a kid perhaps I might learn as I grew older. The chances were that I could not hit a deer anyway; and I might get lost in the woods, besides.

Another week's camp duty convinced me of what I had suspected for some time: those old-timers had a system against which I did not have even a gambler's chance. My week being up again, I suggested that from now on we decide the servant problem in a more scientific manner, befitting our calling as trappers and hunters. My idea was that we each shoot a string of five shots, distance 100 yards, the poorest man being elected cook and camp-tender, which would serve the double purpose of giving the man that did not know how to shoot plenty of opportunity for practice, and at the same time let those who did know how to shoot and hit something do the hunting.

This proposition of a kid trying to teach old-time hunters how to shoot looked so silly to my friends that for a while I thought they would laugh themselves to death. But after recovering sufficient breath, and seeing that I was in dead earnest, they obligingly agreed that if it were my intention to act as cook and camp-tender all winter, they, of course, did not object expending a few shells, especially in view of the fact that our supply of components was ample.

I had previously loaded a supply of shells purposely for the initial shooting match, those for my own use having perfect bullets and uniform charges. For my friends I filed away the entire base of the bullets at an angle of 60 degrees, removing about 50 grains in weight all from one side. This was really overdoing it, and I nearly spoiled it all, for those lop-sided slugs flew like a giant corkscrew and nearly missed the whole target, and I had to shoot all over the target myself to avoid suspicion. The disgusted expression with which my pokerwise companions measured up their scores more than repaid me for all previous humiliation. The vertical and horizontal dispersion of those groups was computed in yards.

With the servant problem disposed of for good as far as I was concerned, I turned my attention to the realization of my dream.

About this time the .30-30 made its appearance in the hunting field, and the big-bore versus small-bore argument raged hot and heavy on the theory of killing power. Someone suggested that if a loaded .22 cartridge were set into a .38-55 or .45-70 bullet, the bullet would explode upon striking game and be a real killer—more effective than the new, small, high-speed metal-jacketed contraption of the .30-30. Not having a drill to drill into a .38-55 bullet with I experimented with .22's on the hot stove lid; and noting that they did not explode for nearly a minute, or until very hot, I thought that perhaps the stunt might be pulled off by placing the .22 in a cold mould and pouring the metal in around it. The proposition looked risky, but the temptation to try was greater; and my friends (now doing the cooking) encouraged me. In fact one of them said he knew a hunter who loaded all his explosive bullets that way.

Dropping in a .22 short I poured in the lead. —! —! —!

When we eventually got through picking lead out of my teeth, nose, eyebrows and hair, it was agreed that the explosive and destructive qualities of the new hunting bullet had been amply demonstrated, and that there was required only additional experimentation to discover a method of retarding the much-desired action and killing power.

Thus ended my first winter in the woods; and since then I have never been completely happy away from them. Years have followed, with always a seeking after that hunter's paradise, and with endless but more careful experimenting in an effort to learn the secret of sending all shots through the same hole. By a strange coincidence I eventually did find that for which I so long had sought—"A Sportsman's Paradise." And also I have learned something more about the secret of making homemade case bullets and hand-reloaded ammunition shoot into the same hole.

Science and Art In Long-Range Duck-Shooting

By COL. EDWARD L. MUNSON

WHEREVER duck-hunters are gathered together, the words "long-range duck-shooting" will probably start a flow of language at once lurid and picturesque. Lately, under the stimulus of alluring prospects held out by the manufacturers of more effective shotgun ammunition, an interest has developed in long-range shooting greater than ever before. This interest is right and proper. It is true, however, that this interest has so far resulted chiefly in the development of an increasing number of "sky-shooters," who, without any understanding of the factors necessary to success, accomplish little or nothing for themselves and do much to spoil sport for others. The bitter condemnation that such shooters bring upon themselves is more than justified. Nevertheless it would be unfortunate to let the heedless acts of selfish individuals operate to bring the whole subject of long-range shooting into disrepute.

Outstanding expertness in any line of sport is entitled to credit rather than criticism. And this applies with equal truth to duck-shooting, in which the results of special skill demonstrate that the usually accepted limits of this sport may be materially extended. The long-range shooter should be judged by his own results and not by those of the average gunner. He belongs to a special class as to shooting efficiency that, instead of deserving criticism, should be admired for its skill and emulated as to its superior technique.

I hasten to admit that only a very small proportion of duck-shooters measure up to the requirements of this high class. Equally I am prompt to claim that present experts have no exclusive ability to excel in the field of long-range work. In my opinion, it is perfectly possible for the average hunter, by intelligent and persistent effort, to put himself in the long-range expert class.

I

Before entering into a discussion of the factors that must enter into such efforts, it will be well to give a definition of the terms used in the title of this paper. By long-range shooting is here meant the ability to kill ducks with reasonable certainty beyond the usual accepted range. Science implies a knowledge of facts pertaining to a given subject. The word "art" means a skillful application of such facts to the end desired. It seems obvious that the more that definite knowledge replaces the vague hypotheses which seem so generally accepted as part of the hunting equation, the more accurate will be the solution of the latter.

In my opinion, long-range duck-shooting may be defined as that at birds beyond the distance of 50 yards. It is beyond this distance, as we shall see, that certain factors especially begin to assert themselves, and to operate with progressive and, for the great

[EDITOR'S NOTE.—This article is perhaps one of the best on the subject of long-range duck-shooting that has ever been written. It runs considerably beyond our regular space limits for a single article, but it is considered altogether too good to be split and run in two parts. Colonel Munson's scientific and scholarly analysis of his subject is based upon a vast and varied practical shooting experience, which had its beginnings back in boyhood days.]

majority of shooters, a controlling influence on results. It is common knowledge that many hunters who kill their birds with sufficient regularity up to 50 yards or so fail to get their game at distances beyond.

I propose here to demonstrate that the reasonably consistent killing of ducks can be carried out, with standard guns and standard loads, up to distances of not less than 75 yards and frequently to 80 yards.

Theoretically this contention will be proved by ballistic and other facts. That it is sound in practice is abundantly supported by the results obtained by individual expert shooters in every community. It is warranted, in a personal way, by my own experience in duck-hunting, which has now extended, in wide diversity, over a period of very many years.

For the first half of that period there was plenty of shooting obtainable over the shorter ranges. Then ducks decreased in numbers, and at the same time became more wary. It became increasingly necessary to take longer chances; but the result was disappointingly small in proportion to the increased powder burned. Beyond 50 yards or so an invisible something seemed to protect the duck. Yet the long-range hits now and then made were so suggestive of possibilities as to inspire the writer to undertake their investigation.

Twenty-five years ago shotgun ballistics were ignored—were not even a matter of speculation. There was no definite data as to what was to be expected of the gun, the ammunition, the duck or the shooter. One either hit or he didn't—and all sorts of guesswork on the part of shooters beclouded the solution of the problem.

The writer accordingly started pioneer experimental work of his own. This was continued over several years—indeed, has continued to the present time. In this investigation every point included in this article was thoroughly studied. Out of it all came the conviction that the ability to kill ducks up to 75 yards was theoretically a matter of approximate certainty. As a result of this knowledge, previous shooting methods were discarded, and with this change theoretical possibilities became accomplished facts. Kills were made in the 50-75-yard zone with as much regularity as had been the case under 50 yards. With this ability to handle long

shots, a wider field for success in the sport of duck-hunting was opened.

II

Having in mind our definition of long-range duck-shooting—the zone beyond 50 yards—let us now take up the various factors that will be demonstrated to determine successful results therein.

The first essential point relates to the gauge of the gun. Various advantages for long-range purposes can be proved for the 10-gauge, but few hunters now use such heavy guns. Nor is this necessary. Besides being the popular size, the 12-bore will do the work. Since this article is written for the benefit of the average hunter, the remarks which follow will relate exclusively to the 12-gun.

The gauge of the gun is important because it sets definite limits on the amount of shot that its cartridge can contain. A greater shot charge is the only long-range advantage that the large-bore guns have over the smaller ones; but it is a very great advantage. While the number of pellets has little to do with the dimensions of shot pattern, it is clear that for the same size pattern it controls the number and density of hits in a given space. And at the longer ranges, where the shot charge disperses over greatly increased dimensions, the number of pellets required for killing density becomes a matter for careful calculation.

We all know misguided souls who use small-bores, like the 20, on ducks and make occasional kills with them at considerable distances. Note the use of the word "occasional." These little guns are not duck guns, even though the contention of small-bore enthusiasts that they will kill as far as larger gauges is cheerfully admitted. So they will; but a few shots at distant targets, with a glance at the table of shot sizes and measures, will demonstrate that they can not kill as often or with an equal certainty. The reason is that at the longer ranges their fewer shots make a too sparse pattern.

Consider the following: For the 12-gauge gun a reasonably heavy load of No. 6 shot is $1\frac{1}{4}$ ounces, containing 272 pellets. That for the 20-bore gun is $\frac{3}{8}$ of an ounce of the same size shot, containing 191 pellets. There is a difference of 81 pellets; or 81 more chances to hit in favor of the 12-bore if both guns are held properly. No further argument seems necessary to show that if the 20-bore enthusiast tries to get into the long-range game, he can do it only under the disadvantage of a heavy handicap.

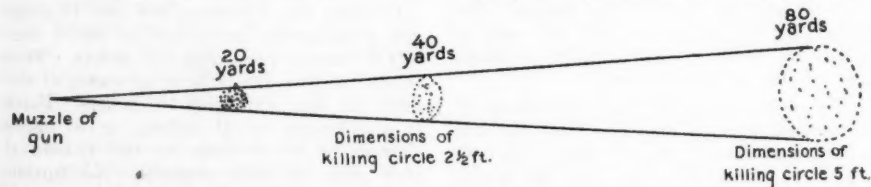
Not only should the gun be of a gauge as large as a 12-bore, but it should be full-choked. In order to have a sufficiently dense pattern at the longer ranges, the barrel should be bored so as to bunch the shot as much as possible. It is true that a modified choke or cylinder bore will throw the

shot as hard as the full choke, and perhaps harder; but the pattern of such wide-open guns is so large, and consequently so thin, that the distant duck has a very good chance to pass untouched through even a well-placed pattern. With anything less than a full-choke, a kill at the longer ranges should be regarded as largely accident.

I am aware that specially bored guns, using high-pressure loads, are now on the market. Such guns can bunch their shot so as to add 5 or 10 yards to ordinary extreme ranges; but their price puts them beyond the reach of the average hunter. Besides, a full-choked factory gun, using factory loads, is already capable of killing ducks farther than the average hunter can place its pattern correctly.

Although the shot pellets are in contact with each other as they leave the gun, they at once tend to diverge. This separation is due to atmospheric resistance. It depends in a degree on the way in which the barrel is bored; also, very materially upon deformation of certain pellets, upon which air resistance acts unequally and causes them to curve away from the straight line of original direction. Disregarding the operation of gravity, which makes every projectile move in a curve from above downward, we may assume that the pellets of the shot charge travel through a "cone of dispersion," the apex of which is at the muzzle of the gun. It is generally accepted that for choke-bore guns and ordinary loads the pattern increases in diameter by about 1 inch for each yard that the shot charge travels.

The usual test of a gun for pattern is at 40 yards' distance, on the basis of the percentage of the shot charge that strikes within a 30-inch circle. This circle, for a full-choked gun, should receive about three-quarters of the pattern. It is possible to make occasional and accidental kills by the scattering and usually deformed pellets outside this circle; but the center of the pattern is the only part that can be depended upon for consistent success. The following diagram graphically shows expansion of shot pattern in relation to distance. The diameter of the killing pattern is twice as large at 40 yards as it was at 20 yards, and the target pattern at 80 yards is twice as large as it was at 40 yards.



The average pattern of ordinary loads, using $1\frac{1}{4}$ ounces of shot in open, modified choke, and full-choke guns, at 40 yards' range and in a 30-inch circle, is as follows:

Size shot	Pellets in charge	Cylinder bore 40 per cent	Modified choke 60 per cent	Full choke 75 per cent
4	165	66	99	124
5	210	84	126	158
6	272	108	163	204
7	364	145	218	273
$7\frac{1}{2}$	431	172	258	323

This table shows clearly that a gun suited to short-range shooting, as at quail, by reason of its open pattern is, for exactly the same quality, entirely unfit for long-range work on ducks. The table also shows the great difference in number of pellets of various sizes of shot in the same weight of shot charge. Any gun, however bored, will kill ducks at 40 yards; and the number of pellets, plus their residual velocity at this short range, makes even $7\frac{1}{2}$ shot an efficient duck load for near distance.

But we are considering long-range, not short-range, shooting. For the latter we shall see that No. 4 shot is best. How dense is the pattern to be expected from such shot? The foregoing table shows that a full-choke gun throws 124 pellets into a 30-inch circle at 40 yards. Since a 30-inch circle contains a shade less than 5 square feet, this means an average of 25 pellets striking in each square foot.

At the greater distance of 80 yards the same shot will have theoretically spread out into a pattern included in a circle 60 inches across. A 60-inch circle contains a little less than 20 square feet, which theoretically again allows a distribution of 6 pellets per square foot. Actually the number of pellets that will strike within this 60-inch circle is a little less than 6 per square foot, for between the 40- and 80-yard distances certain somewhat deformed shot will have been so acted upon by air resistance as to have curved out of the main "cone of dispersion."

But if we drop back to our standard range of 75 yards, a minimum of 6 pellets per square foot may be expected. The shorter distance proportionately condenses the pattern and reduces the proportion of aberrant pellets. Six pellets per square foot is not a dense pattern but is ordinarily a sufficient one—particularly when we recall that a mallard or canvasback is 2 feet long and that the act of flying exposes the maximum of body surface and its most vital areas. Any flying duck within this 75-yard pattern will almost invariably be knocked out of the air.

As with efficiency of the gun, so efficiency of ammunition is of fundamental importance. It is not possible to recommend a single load as best suited to all guns for long-range work, for individual guns, through weight, boring, and other factors, vary in

personal choice was 28 grains of Ballistite and $1\frac{1}{4}$ ounces of No. 4 chilled shot.

But the new super- and long-range loads live up to their advertising claims, and kill better. Nevertheless, despite their advantages, I do not believe that an appreciably larger number of ducks is being killed with them. Because ammunition has been ballistically improved, corresponding improvement in the shooting accuracy of the hunter does not necessarily follow. On the contrary, most hunters do not know how to hit at the extreme ranges with any sort of ammunition. In my opinion, the merits of the new loads have chiefly served as an incitement for individuals to join in a much-increased but relatively fruitless bombardment of distant vacancy.

But whatever the special load that the shooter chooses, once it has been selected it should be used exclusively. It is very common to see this point ignored. Many hunters seem to think that any kind of a load will do. They will shoot a load of low velocity one day and a higher pressure load the next; or may even mix in the same pocket loads having great variation in killing range. Nothing is more destructive of good shooting than the indiscriminate use of shells having different ballistic qualities.

It stands to reason that a man who uses one sort of a load and then another introduces an unnecessary factor of uncertainty into his shooting. For example, over a 40-yard range, a 3-dram $1\frac{1}{4}$ -ounce load of No. 6 shot has an average velocity of 879 second-feet; the same size shot in a $3\frac{1}{2}$ -dram $1\frac{1}{8}$ -ounce load, over the same range, has an average velocity of 979 second-feet. This is a difference of 100 second-feet; or a variation in velocity that at longer ranges would cause a miss on a duck that would have been hit by the faster load.

The size of shot selected for long-range work is of fundamental importance in respect to results. The problem consists in selecting shot of sufficient size and weight to kill when they hit; yet not so large that the number of pellets in the shot charge will not give a pattern dense enough to insure sufficient hits.

The killing power of a pellet depends upon its weight, sectional area, and the velocity with which it is propelled. Small shot have relatively little bulk or weight behind them to produce the shock of impact, and their killing power depends upon penetration. With the same powder load behind them, all shot charges of the same weight, irrespective of the size of the shot, issue from the muzzle of the gun at the same velocity. This muzzle velocity for a 28-grain load of Ballistite with $1\frac{1}{4}$ ounces of shot may be taken as 1,360 feet per second; for the new super- or long-range improved loads as 1,400 feet per second. But with all loads there is a marked tendency for smaller shot to lose velocity, and hence striking force, more quickly than is the case with larger sizes.

This more rapid slowing down of the smaller shot is well shown in the following comparison for a 28-grain, $1\frac{1}{4}$ -ounce load. With the different sizes of shot having the

respect to the proportions of the load they can best handle. The determination of the individually best load is a matter for individual test; and there is sufficient variety of commercial loads on the market to permit of proper selection. A good rule to have in mind is that the need of this kind of shooting calls for high velocity, dense and even pattern, and maximum mass impact. Until the recent high-velocity loads appeared, my

same initial velocity of 1,360 feet per second, their average remaining velocity at the range of 40 yards is as follows:

Size of shot	Velocity, feet per second
4	977
5	958
6	939
7	920
7½	911

It is apparent, therefore, that the man who shoots too small shot does so at the sacrifice not only of weight and mass, but of pellet velocity also. Nor does increased number of pellets to hit the mark compensate for the foregoing deficiencies. The reason is that, at the longer ranges, the small shot have so slowed down in speed, and have so little weight to give them punch, that they can scarcely do more than slightly wound even if they penetrate the feathers.

Each size of shot, propelled in the same standard load, thus has a definite limit to its own killing radius. My own tests and experience warrant the statement that the effective duck limit is 40-45 yards for 7½ shot, 55-60 for No. 6 and 75 for No. 4 shot. This means that the small-shot faddist deliberately decreases his effective radius, perhaps by half. More, he merely injures game at longer ranges that would be cleanly killed with larger shot. Nor is this necessary. At 40 yards or so, No. 4 shot will kill as surely as will 7½ or 6 shot; and at the longer ranges will do it where they fail. Since this is true, only ignorance or folly can excuse the use of shot demonstrably too small to meet effectively the range requirements of present-day duck hunting.

Large shot mean much larger radius of potential killing power. For certain loads, the pellet energy of No. 4 shot striking at 55 yards is given as 2.40 foot-pounds, while the pellet energy of No. 2 shot striking at 75 yards is 2.35 foot-pounds. For a 70-yard range in both instances the residual velocity of No. 4 shot is 450 feet per second, and for No. 2 shot is 500 feet per second.

These facts demonstrate that by thus increasing the size of shot by two sizes we can increase killing range by 20-25 yards—provided we can hit the bird. This statement must not be construed as an argument for the use of No. 2 shot, for at 70 yards there is still plenty of punch (1.45 foot-pounds) in No. 4 pellets to kill ducks, and there are 58 more of the latter pellets to thicken an otherwise sparse pattern.

My own experience is to the effect, all things considered, that No. 4 shot is best for long-range shooting. For smaller ducks, more lightly feathered and more easily killed, No. 5 would probably have sufficient killing power and would give 45 more pellets to add to the chances of hitting these smaller targets. But we have to take the game as it comes, large and small. I prefer, therefore, not to depart from a definite standard of ballistics by reason of occasional instances where a denser shot pattern might be theoretically desirable. As it is, I know exactly what my gun will do, and take every shot up to 75 yards. I know, on the other hand, what my gun will not do; and it would never occur to me to try an 85-yard shot.

III

Practically everyone who owns a rifle has targeted it "to see where it shoots"—that is, what it can be relied upon to do. Probably very few shotgun-shooters have targeted their scatter-guns for the same purpose; yet it is quite as important for them to know exactly what they can expect to accomplish with the latter.

Many shooters ignore this matter and are content to remain in complacent ignorance of shotgun ballistics generally, in the comforting idea that spread of shot pattern may be counted upon to offset other error. It is true that shot spread will do this to a certain extent, but only within the very definite limits of the killing pattern. Nor does the fact that a bird may now and then be scratched down by a straggling pellet far outside the killing pattern alter the truth of this general statement.

Not all shotguns, especially double guns, center their pattern on the target. Such center may fall above, below, or to one side, according to the way the gun fits or is naturally held. Targeting will give exact information on this matter and indicate any measures for correction. By targeting, also, one determines the character of the load that the individual gun handles best, for not all guns are alike in this respect.

Targeting likewise determines the density, evenness and sufficiency of pattern at the various ranges. These are not items of great importance over the shorter distances, but they become paramount factors at the longer ranges.

First to consider is the "pull down" of gravity. Everyone understands something of the trajectories of rifle projectiles and the allowance of elevation necessary; but the influence of gravity on the trajectory of the shot charge is ignored, though this influence is felt over shotgun distance much greater than with the rifle. This is due to the fact that the velocity of shotgun projectiles falls off very rapidly, for the reason that spherical pellets meet with high air resistance because of their light weight for their proportionately large sectional area.

Consider the following: A load of 3 drams of powder and 1 ounce chilled 6 shot, with an initial velocity of 1,300 feet, drops the center of its pattern only .068 of a foot at 25 yards; but this drop amounts to .512 foot at 50 yards, and is 2.06 feet at 75 yards. Compare the high trajectory of this shot load with that of a .22 long-rifle bullet, which starts out with the relatively low velocity of 1,012 second-feet, yet falls only 6 inches below the bull's-eye at 100 yards. Even a high-pressure goose load will drop its pattern about a foot and a half at 80 yards. It is clear that such a drop in shot pattern at long ranges needs compensation through higher holding.

This need to hold high is easily demonstrated by a single shot on the marsh. Pace off 75 yards from a stake in the water, aim at the water-line, and see where the shot hits. The same test, too, will give considerable information as to spread of shot pattern.

The best way to determine the foregoing

points is to tack good-size bull's-eyes on large sheets of wrapping paper, shoot at them at 40-, 50-, 60- and 75-yard ranges, trying out various loads and comparing the results. The bull's-eyes should be at the center of circles of 30-inch diameter. At 60 yards and over, the targets should also contain outer circles of 60-inch diameter.

A quick way to determine sufficient density of pattern on a series of targets is to bend wire into a frame of the approximate size and shape of a flying mallard. This frame, laid over the target, will show at a glance the number and location of hits that would have been made. No gun that will not habitually place three pellets of sufficiently large size within this frame, at a distance of not less than 70 yards, is fit for long-range duck-shooting. But most standard choke-bored guns will meet this requirement.

This test will sometimes show unhit areas large enough to contain a duck, for shot at long ranges seem to show an unaccountable tendency toward bunching. But such occasional vacant spaces do not affect the claim for a general efficiency of the gun and its load for the distance. They merely mean that, in a small proportion of shots, a bird may pass unscathed through even a well-placed pattern.

While the facts are being ascertained on the foregoing points, the degree of shot penetration should also be determined. This resolves itself into a question of velocity and size of shot. Relative penetration can be estimated by laying a magazine—the kind with soft, rough paper leaves is best—behind the target, and counting the number of pages penetrated with the different loads at the various ranges already specified. My own tests on paper targets, both as to number of pellets making hits and their degree of penetration, were checked up by shooting ducks with small shot, hanging the dead birds up, and shooting them again with coarser shot at the longer ranges. The birds were then examined, skinned, and the results of the larger shot determined by dissection.

Such penetration tests will prove eye-openers to the individuals who insist upon using too fine shot. They can see for themselves that their tiny pellets have not enough remaining energy over distances where the shooter has to "reach out after them." And their visual proofs are borne out by ballistics. An ordinary load of No. 6 shot has a striking energy of 3.3 foot-pounds at 25 yards, of 1.27 foot-pounds at 50 yards and but .43 foot-pound at 75 yards. This striking energy of No. 6 shot at 75 yards will hardly more than penetrate the feathers. But No. 4 shot holds up its striking energy to 3.75 foot-pounds at 40 yards and 1.45 at 70 yards, giving a striking energy at the longer ranges about the same as No. 6 gives at distances 20 yards less. As to the 7½-shot faddists, their proper range is about 20 yards less than the No. 6 men.

IV

Contrary to popular conception, a charge of shot, flying through the air, does not pro-

ceed in its entirety as a compact, globular cloud. What is known as "shot-string" occurs. While we have seen that all shot from the same cartridge have the same initial velocity, they do not maintain this original equality of speed. Some few pellets precede the main cloud of shot; but a much larger number lag behind as a result of deformation by jamming in the chamber or choke of the gun, and through such deformation are slowed down by increased air resistance.

Targeting by the method above suggested will not show shot-string, for pellets arriving in sequence at different times will puncture the paper alike. But the existence and extent of shot-string are very clearly shown by chronographic apparatus. Such machines show that, with ordinary loads, shot-string may amount to as much as 20 feet over the short distance of 40 yards, and 10 feet with improved loads. At this distance the improved loads will hold 85 per cent of the pellets in the length of 4.14 feet, while with ordinary loads 85 per cent of the shot extend over 7.23 feet.

This straggling within the shot charge increases with the distance traveled, and many of the wandering pellets are useless on a moving target because they arrive too late. Consider the fact that the shot charge may string out as much as 35 feet or more at the longer ranges. The residual velocity of No. 4 shot at 70 yards being 450 feet per second, it is obvious that it would take 1/13 of a second for the last shot of such a string to reach the place of the leading pellets. But in 1/13 of a second a duck flying at the relatively low speed of 75 feet per second would have moved through about 6 feet of space. Consequently if the main charge of shot was properly delivered, a very appreciable proportion of the whole would pass harmlessly behind the duck.

Since this straggling is due to deformation of shot, anything that will reduce the latter is desirable. It is for this reason that chilled shot, in which the lead has been hardened by antimony, is far better than soft shot for long-range work. Copper-coated shot, lately put on the market, represent a further effort against deformation. I have had no experience with the latter; but if their special treatment will reduce deformation it will by so much improve pattern. It has also been found that powders that burn too quickly cause the shot to deform as it leaves the shell through the sudden resistance imposed by crimping. The best ammunition is now loaded with slower-burning powders that progressively detonate in the barrel and give an increased velocity with diminished breech pressure.

In all long-range work, an important point which the shooter must understand is the average rapidity with which shot pass over the various distances. No information on this point can be obtained from ordinary target tests, but the chronograph gives it accurately. Shot velocity, of course, is a vital factor in determining the space ahead of a flying duck at which the shot charge must be delivered. Some data as to shot

velocities have already been given. In addition, the following is instructive: A 3½-dram 1¼-ounce load of No. 6 shot, having a muzzle velocity of 1,360 feet, passes over 40 yards at an average velocity of 977 second-feet, over 50 yards at 898 second-feet, 60 yards at the rate of 822 second-feet, 70 yards at 759 second-feet and 80 yards at an average velocity of 701 second-feet. An important point to note from the above is the rate at which the velocity of the shot pellets falls off. The average speed of a shot charge moving over a space of 80 yards is only about two-thirds of its speed as it moved over the first half of this distance. This has direct application in the disproportionately long leads necessary with greater distances to compensate for decreasing shot velocity.

The average velocities just discussed must not be confused with residual velocities, though both of them vary inversely with distance. A knowledge of average velocities, as has already been said, is necessary to hitting the flying duck. It is important to know that a certain load of shot reaches the 60-yard point in .22 of a second, and has maintained an average rate of speed of 822 second-feet while doing it. But the striking velocity—that is, the rate of speed at which the shot is going as it passes the 60-yard point—is quite another matter. The actual velocity at this point is now only 495 second-feet. Previous velocity enters only into hits; it is the residual velocity of 495 second-feet that determines the kill, for it supplies the energy behind punch and penetration.

It has already been shown that with longer and longer ranges a shot pattern increases in its periphery and thins in density, so that fewer and fewer pellets will hit the mark. Now comes the fact that even these fewer pellets decrease in their individual killing efficiency. What is possible in the way of compensation?

The killing power of a shot charge depends upon various factors. These are the striking velocity of the pellet, which determines its penetration; the weight of that pellet, which gives the effect of shock or mass impact; and the number of such pellets that hit the bird. Striking power for each pellet depends upon its residual velocity and upon its weight. Sectional area likewise influences the resulting degree of shock. We have seen that if powder and shot charges are equal, the muzzle velocities of different sized shot are equal; but their striking or residual velocities are not equal, neither for the same shot at different ranges nor for different shot at the same range. These vary greatly, with the larger pellets maintaining their velocity much better than the smaller ones, particularly at ranges beyond 40 or 50 yards.

Two alternatives, therefore, suggest themselves, at least in theory, to improve killing power. The first is that loads might perhaps be developed so as to greatly increase shot velocity. To this it may be replied that various facts stand in the way. The average gun would not stand the tremendous

pressures required. It is likewise a fact, under the law of diminishing returns, that increased breech pressures do not proportionately increase shot speed over long distances. It is true also that increased muzzle velocity means increased jamming of pellets, with deformation and detriment to pattern. Finally, it is true that shot, especially the smaller sizes, lose speed on account of air resistance much faster at high velocities than when traveling at the usual rate of 700-900 feet per second. Little improvement, for the present at least, can therefore be expected along the line of greater shot speed.

But another factor of compensation presents itself. This is to use larger shot, which not only hold their velocity better but strike a harder blow by reason of their greater weight and size. This matter of size, however, has its limits, for to go too far in respect to killing power may thin the pattern so that the bird may not be hit at all. These limits are quite well defined in the following table. Starting out with loads giving an equal muzzle velocity, it shows the relative amount of punch delivered by different sizes of shot at various ranges:

Pellet energy, foot-pounds								
Size	25	40	50	55	60	70	75	
shot	yds.	yds.	yds.	yds.	yds.	yds.	yds.	yds.
2	...	6.65	4.80	...	3.72	2.75	2.35	
4	...	3.75	2.80	2.40	2.05	1.45	...	
6	3.30	...	1.27	...	...	...	0.43	

It is apparent from the above table that to shoot at ducks with No. 6 shot beyond the range of 55-60 yards is practically useless.

V

Let us now, for the moment, turn from consideration of the duck-hunter's tools to that of his target. Every waterfowl-hunter should be something of an ornithologist, at least to the extent of being able to differentiate instantly between the various common varieties of ducks while in the air. Such ability has a practical value in two ways: (a) it gives reliable data as to the distance of the duck, and consequently of shooting range, and (b) considerable information as to probable speed of flight. Both of these factors enter into determination of the way the gun needs to be held in respect to the flying target, and consequently into the hunter's success.

It is not possible here to go into the special details by which different varieties of ducks may be identified. Suffice it to say in this connection that the experienced hunter will recognize variety by peculiarities of flight, size, form, speed of movement, coloration and distinctive marking.

The speed at which ducks fly is one of the controlling factors in the success of their shooting. How fast do ducks travel? No exact figures are available on this point; but with the present progress of aviation we will doubtless soon be in possession of accurate data thereon. The speed of ducks varies considerably with the variety of duck, and depends upon whether they are flying in a calm, or with or against the wind; whether they have been shot at, or are moving along unfrightened; whether they are migrating,

or swinging from one feeding place to another; and other factors. Such matters the experienced hunter instinctively takes into account in placing his shot.

It is obvious that such variables are an inexact basis from which to proceed. Nevertheless, approximate estimates are better than no data at all, and with them to guide experience, the hunter will acquire an intuitive ability to gauge the speed of duck flight sufficient for all practical purposes.

I once belonged to a club on the Missouri bottoms, with a railroad paralleling the marsh. The migration of ducks followed the north-and-south line of the railroad, on which distances were easily determined by the spacing of telegraph poles. There were various blinds above and below my own, and I frequently timed ducks from the instant there was a report from a blind above until the birds were opposite my own; or from the time the ducks passed me out of range until they were shot at from a blind below. As the velocity of sound is about 1,100 feet per second, allowance for this factor was made in speed calculations.

I never knew a duck with a "through ticket," under ordinary conditions, to fly at a lesser rate of speed than 50 miles an hour. A frightened duck, with a stiff wind behind it, would move at the rate of 90 or 100 miles an hour. Reducing different velocities in miles per hour to feet per second, the distances passed over would mathematically work out as follows:

Speed per hour, miles	Speed per second, feet
40	59
50	73
60	88
70	104
80	120
90	132
100	146

From his own experience, Askins gives the following figures for the speed of different varieties of ducks:

Variety of duck	Speed in feet per second	Av. speed
Mallard	55 to 90	75
Spoonbill	55 to 85	70
Pintail	60 to 100	80
Widgeon	80 to 100	90
Green-wing teal	100 to 130	115
Redhead	110 to 130	120
Blue-wing teal	120 to 140	130
Canvasback	130 to 160	145

These figures quite closely approximate my own estimates. I would also put the speed of the bluebill as almost, if not quite, that of the canvasback. And the ruddy duck, foolish as it is on the water, is one of our fastest fliers once it gets going. Wind, of course, is a great factor. For the purposes of the shooter, it is not the speed with which the duck moves through currents of air but the rapidity with which it passes over fixed points on land.

Along with duck speed, the hunter must also be a shrewd judge of duck distance; yet if one inquires of the average hunter the latter will be found grossly ignorant in such matters. How can one judge of duck distance? In certain kinds of shooting, as over decoys, it is sometimes possible to pace off the distance to clumps of reeds, willows or other prominent objects and use them for comparison on flying birds. At one blind I shot from for several years, bushes stuck in

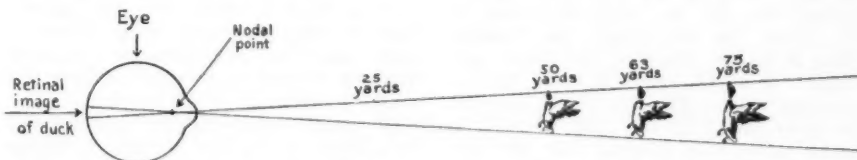
the mud and water at measured distances of 25, 50 and 75 yards were very helpful.

A good practice that can be carried out anywhere while walking is to glance ahead at some object, instantaneously guess its distance, and then check up on accuracy of the estimate by pacing. For the average man, 6 paces may be considered equal to 5 yards.

But when a bird flies high, ground landmarks have little value. Ordinarily the duck is seen merely as an object against the sky. Under such conditions, the only way to determine distance is from the size of such object itself. One way to do this is to estimate the distance of the duck at the instant of shot; then to check back on this estimate by pacing the distance necessary to retrieve the dead bird, allowing, of course, for height and drift in fall. Another way to learn about distance is to hang up a dead duck, with spread wings, against the sky line. The hunter first studies its size and appearance over known distances; then reverses the process by walking away, turning suddenly, and instantaneously estimating the distance of the bird from its comparative size.

Estimates of this sort are based upon a law of optics. What the doctors call the "visual angle" is formed by imaginary lines running from the peripheral extremities of an object to the nodal point of the eye, analogous to the optical center of a lens. These lines cross and continue back to impinge on the retina, and determine the size of the retinal image. Thus an object seen at 75 yards would have to be three times as large as at 25 yards in order to appear of equal magnitude, though in both instances the visual angle would remain the same.

This fact has a direct application to the duck hunter. When we compare the measurements of certain common ducks, we find that a teal has an average length of about 15 inches, a widgeon of 19 inches and a mallard of 23 inches. It is clear, then, that a teal at 50 yards will look as large as a widgeon at 63 yards or a mallard at 75 yards. This fact is diagrammatically represented in the accompanying diagram.



Sufficient light is necessary to bring out clearness of detail, which is one of the factors that enter into estimates of distance. In semi-gloom or mist, by reason of the indefiniteness of their outline, ducks give the impression of being farther away than they really are.

Size, while giving the key to duck distance, has considerable value, at angles of less than a right angle, as a guide to duck speed. For incomers, outgoers and quartering birds, a practical aid in estimating its speed is the rapidity with which the duck changes in apparent size.

After the hunter has learned the distance at which his gun will kill, he should be able

to recognize its limits instantaneously and never fire at a bird beyond this killing radius.

VI

Before we take up a discussion of lead, it is necessary to call attention to the fact that there are two widely different styles of fire in shotgun-shooting. Assuming that speed of duck and velocity of shot load are the same in both cases, a human variable—the manner in which the hunter uses his gun—now enters the problem.

Unquestionably the majority of hunters shoot a shotgun much as if it were a rifle. Youths graduating out of the air rifle and .22 period naturally tend to handle the shotgun along the style previously learned. And practically all trap shots shoot this way, because it has special advantages in their special sport.

This style of shooting may be termed the "aim-and-follow-through" method. In it the hunter aims deliberately along the barrel, in most instances with one eye shut. He sees the sight against the flying target, swinging the gun muzzle from behind the latter; then, as the sight moves ahead of the target along its pathway, the gun is discharged. At the instant of discharge the muzzle of the gun is actually swinging faster than the duck through the arc over which the bird is moving. And the muzzle continues this swing through the brief fraction of time required for pressing the trigger, the hammer to fall and the shot to leave the gun.

It is a matter of simple mathematics to prove that even a slight movement of the muzzle in "following through" with the flying target will result in lateral shift of the shot pattern over a distance of many feet at the longer ranges. Thus if the gun muzzle is 3 feet from the shooter's eye and is swung to the left but a single inch, the shot pattern is shifted 3 feet and 4 inches to the left at 40 yards and 6 feet and 8 inches to the left at 80 yards. A 2-inch swing will double these figures. Gun-swing through a small arc thus compensates for duck flight through a much larger arc.

The other method of shooting is that of the much smaller snap-shot group. In this method the hunter shoots with both eyes open, pitching the shot, without conscious aim, into the space where the game is expected to be when the shot charge arrives. Theoretically the snap-shot man throws his gun up vertically to the line of flight. In practice, however, though the cross-flying duck is never covered, with many hunters of this group there is undoubtedly an oblique swing of the muzzle toward the direction of the duck flight as the gun comes up. And in the case of all shots after the first, some modification of the "follow-through" method is obviously necessary.

Between these two schools one consequently finds individual variation in shooting methods, so that many hunters, reasoning from their own varying practice, naturally do not agree as to leads necessary. Some of the "follow-through" men will say—and firmly believe—that they only lead two ducks' length or three ducks' length at distances in which ballistic tests prove that many times greater leads are actually necessary. Such men hit their ducks because their "follow-through" method compensates for most of the speed of the bird, and their conscious lead in addition compensates for the remainder.

Since the two styles of shooting are so different, and since within the same school no two men shoot exactly alike, no set rules are possible that would apply equally to all. But general principles are laid down in this article that any shooter can adopt, in one way or another, to the betterment of his particular style.

This is no place to enter into any academic discussion as to the relative merits of the two methods just described. With proper training, both are successful. I know them both, from personal experience. Personally, I used the "aim-and-follow-through" method for over 20 years. Then I gave it up, and for more than an equal period have used the snap-shot method with demonstrably much better results.

I say "demonstrably," because for many years I kept a record not only of the number of ducks bagged but of shots fired. The percentage of kills for cartridges expended is the true test of marksmanship. With my later style of shooting, not only were more ducks killed but they were killed at far longer ranges, with fewer cripples, and with fewer shots. With practice came an ability to forecast the approximate number of birds that would be bagged, under ordinary conditions, for any given number of shots fired.

As nearly as possible, I have tried to analyze my own methods. I shoot with both eyes open, with vision focused on the duck. The gun comes up automatically through a vertical line, and the trigger is pressed at the instant the butt strikes the shoulder. There is no aim whatever—the muzzle only vaguely, if at all, enters into the field of conscious vision. The shot charge flies into the space ahead of the duck where it is sensed rather than reasoned that shot and target ought to meet.

How do I know where the shot is going unless it is directed by the sight? Practice gives very accurate intuition in such respects. It is possible to concentrate vision on one point yet hold the gun muzzle on another. A man "sees" more than he "looks at." This is easily proved. Look intently at an object some distance away; and then, without changing eye focus, point your finger at another object, say, some 20 feet or so from the first. If you then move your eyes so as to sight along the finger, it will be found that the latter is pointing correctly at the second object. As to holding ahead, I am sure that my shooting approximates very closely to theoretical ballistic

requirements. The space that the shot goes into may be 15, 20, or sometimes as much as 30 feet ahead of the duck.

This style is as far from the "follow-through" method as it is possible to get. The act of shooting is co-ordinated totally differently from that of the rifleman or trap-shooter. Rather, it resembles the act of throwing a stone, loosing an arrow, shooting a sling shot, or even spitting at a cuspidor. This method may not be suited to the style of others, but in my own case it brings gratifying results.

VII

All the foregoing remarks have been contributory to the discussion of "lead." By lead is meant the distance ahead of the flying duck necessary to compensate for the speed of the bird and the velocity of the shot charge. It represents such accurate co-ordination that when the gun is discharged into the pathway of the duck the bird will fly into the cloud of pellets.

Lead is necessary with all flying ducks except at the very shortest ranges, at straightaways and at very acute angles. Outside these conditions, an increasing adjustment for speed and distance must be made. The maximum lead necessary will be of course for ducks flying at right angles to the gun, moving at their greatest speed, at the greatest range at which gun and ammunition are capable of killing.

The following leads have been worked out as mathematically necessary in order to hit ducks flying at right angles to the line of fire, and at a speed of 50 miles per hour, or 73 feet per second, using No. 6 chilled shot in a 3¼-dram and 1½-ounce load:

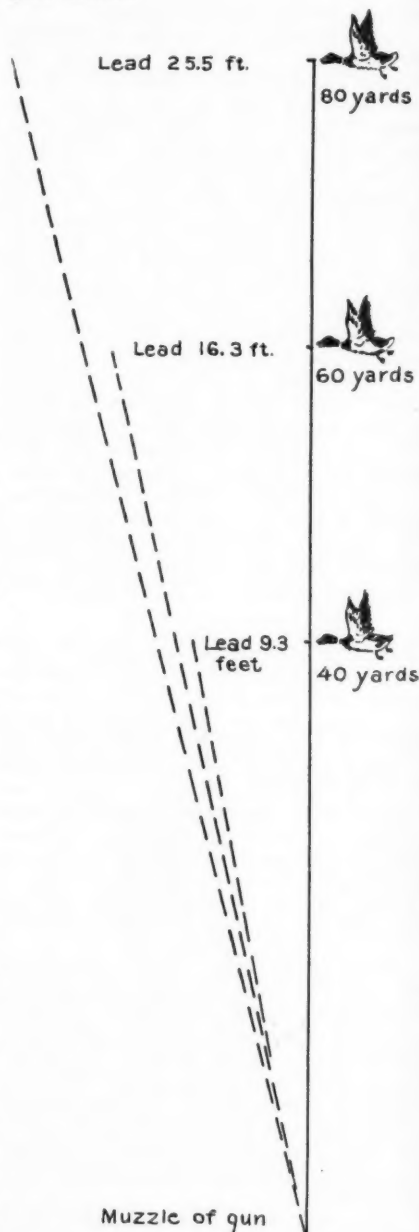
Range, yards	Aver. veloc. over range, second-feet	Striking veloc. at end of range, second-feet	Time required for flight of shot, in seconds	Lead in feet required for flying bird
40	950	661	0.1263	9.3
50	882	580	0.1701	12.5
60	812	470	0.2217	16.3
70	748	390	0.2808	20.6
80	689	325	0.3483	25.5

If the duck is flying at a speed greater than 50 miles per hour, these theoretical leads must be proportionately increased. Thus for a speed of 60 miles per hour they would be increased by 20 per cent.

Of course a quartering bird does not need such leads, for its line of flight in respect to the hunter is less than a right angle; and it has already been shown that the way in which the gun muzzle is swung up and traversed along the path of the duck may materially reduce the need for such theoretical holding ahead. Yet the above figures are more than suggestive. How often does it happen to inexperienced hunters that bird after bird is missed; then a flock comes along, the leader is fired at, and a "tail-end" drops?

It is entirely erroneous to assume that the lead required to kill a duck is directly proportioned to the distance of the latter from the hunter. Such is not true for the longer ranges, where disproportionately longer leads are progressively necessary. This fact

is demonstrated in the accompanying diagram. Starting with the lead necessary at 40 yards, this is not merely doubled at 80 yards but instead is tripled. The reason is found in the rapid slowing down of shot velocity due to atmospheric resistance. The table just given shows that it takes No. 6 shot but .126 second to pass over the first 40 yards and .222 second to pass over the next 40-yard interval.



The amount of lead necessary is the most essential factor in long-range duck-shooting. Its magnitude is the hardest thing to realize for the longer ranges; yet until it is realized, and properly acted upon, failure is inevitable. Hunters tend to aim "at" something, or at least to shoot reasonably close to it. It is not easy to bring one's self to shooting away from a duck in order to hit it; yet that is

exactly what has to be done if the hunter expects success.

VIII

With the above statement, we enter upon a new subject—that of human psychology. However, we need not go into this subject further than to state that man really has two minds. One is his conscious or thinking mind, under control of his will, and exercising the critical faculties through which he reasons, learns and carries out voluntary acts. The other is the subconscious mind, which is a storehouse of previous acts, experiences and impressions that, taken together, form the mainspring of habit. This subconscious mind takes control and governs action in sudden emergency. It functions automatically, instantaneously, and through the unreasoning emotions.

We see the results of automatic control of act by the subconscious mind in the delicate work turned out by an expert artisan while the latter is thinking of something else, or perhaps looking elsewhere and talking to another person. Perhaps the best example is found in the soldier, who learns slowly and painfully, with his thinking conscious mind, certain prescribed movements. Later, in battle, when he is mentally confused and beyond the reach of leadership, his subconscious mind assumes charge and he mechanically and unreflectingly goes through the movements that he learned long before through the exercise of voluntary will power, but which through repetition have now become an unconscious habit.

One of the difficulties of the average duck-hunter is found in the so-called inhibitions, or interference with voluntary act by the subconscious mind. The need to deliver the shot into an empty space—perhaps the width of a city house—ahead of the duck may have been reasoned out clearly by the critical faculties of his thinking mind. Yet at the fractional instant when the shot is to be fired something emotional within the hunter arises to offset known fact and oppose matured judgment. That something, in periods too brief for the critical faculties to co-ordinate, is the subconscious mind functioning along the lines of previously established habit.

Often the trigger is pressed, although the shooter realizes that the lead is not enough. In such instances the shooter is aware of a definite struggle between his logical, thinking mind and his unreasoning subconscious mind, in which the latter has won—has won because there was not time to fully reason; and the subconscious mind took control and directed act along the lines of easier function intuitively resorted to as a result of earlier, and faulty, shooting habits.

How can such faulty habits be overcome? Only by the same mechanism as that by which they were established—that is, by practice; but by practice along correct lines; practice reinforced by will power, in which there is conscious mental effort to achieve correct procedure for every shot. Such practice will, in time, result in the gradual replacement of old, faulty habits by new, correct ones. New habits, in which the au-

tomatic subconscious mind has been trained to react exactly the same to the stimulus of the far-flying duck as the reasoning faculties react to the same stimulus.

IX

I have touched upon human psychology to forestall possibly sarcastic inquiries as to how compensation for the many factors of long-range error that have here been discussed can be reasoned out as the duck speeds past. It will bear repeating that, under such circumstances and fractional period of time, reason in some respects is in abeyance; but the result of past reasoning—that is, correct habits—automatically and intuitively control the shooter's act.

But the conscious mind can do much in preparation for that act. It can acquire a definite understanding of ballistics—what the gun will do and the ammunition will accomplish. It can learn to estimate the distance and speed of a flying duck with much accuracy. It can analyze individual shooting methods and rectify their errors. It can bring reason and will power to the aid of proper training. But after correct habit formation has been accomplished, its work is done.

It is the subconscious but trained mind, functioning instantaneously in the experienced hunter along the lines of past impression, that governs the shot at the duck. It governs the latter automatically and without mental effort. Scientific facts are intuitively co-ordinated with estimates based upon past experience. In the accuracy of their co-ordination and application lies the art and success of long-range duck-shooting.

DON'T DO IT!

(Continued from page 7)

fell upon deaf ears. At about 3 p. m. that same day I was sitting on a log about three-quarters of a mile to the south of camp. The sharp crack of a rifle rang out at apparently one-half mile to westward. Naturally, I turned and listened. An interval of perhaps three minutes elapsed; then came three shots in rapid sequence; then a loud cry of distress: "Help! Help!" At once I started in the direction of the calls, but my progress was exceedingly slow. Swamps and the vast refuse from the lumberman's cuttings of a few years previous greatly retarded my movements. But I reached the scene in time to witness the finish. A man wrapped in a blanket and wired to an improvised stretcher made from two saplings was being carried to the cabin. Three strong men, paled and weeping as women, carried the body. Yes; it was Herb, the man whom I had so persistently warned of his danger—the man who persisted in wearing deer-colored clothes while hunting deer. A companion had noticed a slight movement, a shaking in the tops of the small bushes. He saw a spot of brown; it moved; he took a chance and pulled the trigger. The ball from the Savage rifle hit the man's chin from in front and passed out at the back of his neck. Death doubtless was instantaneous.

After the confusion had subsided we sent to a neighboring camp for help. They sent four husky young farmers who were equal to any emergency; and that night at 10 o'clock six men started with the remains on the long journey to the railroad. With flashlight and compass they moved along the narrow trail, winding and uncertain. Early morning found them at the station. The remains were carried by train to a town 40 miles southward, where a coroner decided that no criminal charges should be preferred against the man who did the shooting. A few days later there was a funeral in the southern peninsula of Canada. All that was mortal of Herbert Simpson was consigned to mother earth. Beside the sorrowing family of the deceased there stood a middle-aged man of massive physique, his head bared and bowing low, his face betraying the mental anguish he suffered. No one censured him, for he was an object of pity. He was the man who took a chance. He had killed his lifelong friend.

CURING THE RUSSIAN TRIGGER

By HARLOW PEASE

THE Russian 7.62, from current comment, seems to have those shooters who are willing to discuss it at all divided into two camps, one of which is possessed by a violent prejudice. The following remarks may perhaps be justified by the fact that the writer follows the craft of removing prejudices (and creating them) as to various controverted questions, and spends odd hours contemplating weapons of precision.

Last spring I obtained from the D. C. M. one long Russian and one modified at Benicia Arsenal, the latter by coincidence costing, with express, exactly \$7.62. The military arm, when equipped with a 36 Lyman, seemed of remarkable practical accuracy, both at target and popping around in the brush and rocks, owing mostly, I suppose, to its immense sighting radius and capacity for steady holding; but the general effect contained too many sour notes arising from its awkwardness and stiff action, so the Lyman was transferred to the modified arm, along with a VM front sight. This turned out to be a happy combination for the groundhogs or "rock-chucks" found in these parts of Montana. But much grief over a soggy trigger pull and some roughness of functioning led to my obtaining from others the remedies here set down. They have not been published to my knowledge.

Mr. L. J. Hathaway gave me the benefit of his experience in smoothing the entire action, the outstanding points of which are: (1) to remove a sharp edge on the under side of bolt, at the forward end of the long groove in which runs the sear nose when the bolt is operated, and (2) to round off edges of the same groove. As issued this presents two sharp edges on either side of the groove or channel, connected by a semi-circular edge at the front end of bolt, all of which catch and drag on the rim of top cartridge in magazine. By rounding and smooth-

(Continued on page 19)

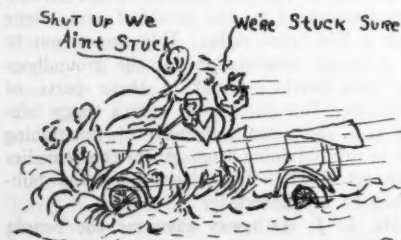
A Red-Letter Day

By ALLYN H. TEDMON

OUT of numbers of hunting trips, or any kind of trips, for that matter, a few will stand out as exceptionally red in their hue. One such day comes to mind with all the happenings; and as my partner in crime happened to be one who has many unknown (to him) friends, I feel well justified in wasting a little ink.

Chauncey Thomas and I had made a number of invasions into the lands of the prairie dog. On the day in question we might again have been seen dusting our way east of Denver for the "happy hunting grounds." C. T. was armed with a sawed-off Winchester single-shot .30-40 that he nicknamed "Kick 'em Dead." It would sure do it, too, at both ends, when using full charges. This was quite a rifle at that. It had a 20-inch Krag barrel, Lyman sights, and C. T. had murdered off the south end of the stock until the whole thing didn't weigh any more than a fair imagination. On this day he had a batch of subloads. I don't just recall the powder charge, but I do recall the boat-tail Western bullets. They had a velocity of around 1,800 feet, I should judge, and shot fine. My own rifle was my Savage Model '99, .250, Lyman sights, sling, aluminum butt plate and all, as has been described many times before. Its ammunition was the .25-20 Western 86-grain soft-nose bullet in front of 20 grains of Schuetzen powder. The du Pont people gave me figures on this load, and it develops just a trifle under 2,000 feet, shoots fine and is heap cheap. So much for the battery, as Sir Samuel Baker would have said it.

About the first thing of interest we came to was a very formidable looking mudhole. C. T. was for sending for a boat right then and there, but as I have found from long experience that the sooner you get stuck the sooner you can begin digging out, I drove on in and, much to my relief, out.

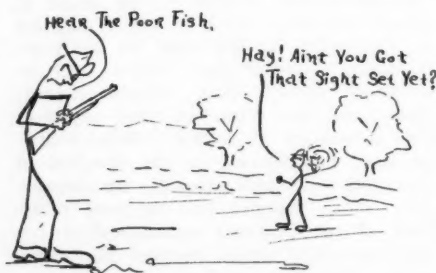


Some distance beyond the mudhole I drove to the ruins of an old overland stage station. We spent some time looking over the ruins. Only part of one wall is standing, and probably if it could talk it could tell us of many buffalo, numerous Indian scares and possibly a skirmish. It could no doubt tell of some terribly tired and steaming horses. It could reveal to us pictures of brave little women, who though nearly exhausted,



climbed back into the stage for the last run into Denver, then as today the Queen City of the Rockies. C. T. couldn't help but retell stories told him by his father and mother, both of whom came West long before the iron horse snorted its way over the Great American Desert. It was all very interesting. It makes us fellows who have parents who helped blaze the Western trails, and who were born here ourselves, realize that "our country" is about gone. Like the Indian, the pioneers are being pushed aside and the vast numbers who have followed in the paths they made and made safe, forget that there ever was such a thing as a God-fearing rifle-bearing man and a brave, true and child-bearing woman. Such, however, is the case; and the few fast-fading landmarks of the old West are now mute reminders to the few remaining "White Indians," as C. T. has named us.

As is to be expected, C. T. always has to set the sights on his rifle. I tell him that the only difference between himself and me

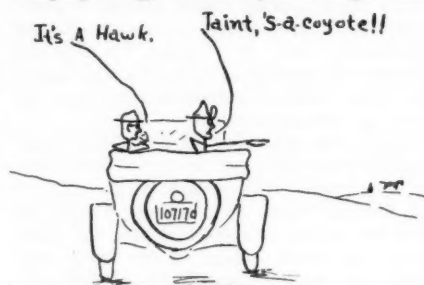


is that my sights are always set and his never are. He is a shot that few can beat, and most anyone can skin me—at the target anyway.

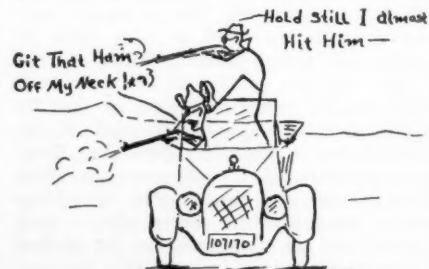
Well, after shooting up the west bank of the creek and eating a lunch alongside of an old water hole, at whose side a few cottonwoods had managed to provide a little shade, we rambled on. C. T. managed to bag a dog once in awhile as we happened to come upon them. At one place we saw several scamper for the burrows, and we both cut loose. One especially, having delayed his flight for safety, gave C. T. a good shot. We saw this dog go down and walked over to where it lay. Upon picking up

the little animal we were surprised to find not a mark on it, yet it was very dead. While trying to solve this mystery I spied another one some eight or ten feet away, also dead and badly shot up. Putting two and two together it became plain that C. T. had hit the dog he aimed at all right, and had also added the extra one. What probably happened was that when the heavy bullet hit the hard ground a piece of jacket or a pebble was shot sideways and hit the other dog, which was standing near. This object hit the little fellow in the breast and killed him instantly. As is generally known, prairie dogs are very tough little duffers. Their hide is tough and their spirit is tougher. It was very noticeable that the 86-grain bullets from the Savage did a whole lot more smashing than did the heavy boat-tail. This, of course, should be expected.

But let me tell the crowning event of the day, and the end will be. The car top was down; and, driving along over the prairie, bumping along, we both spied a large hawk



on a distant hillside. We commented upon it, and were both looking at it when, lo and behold, as the ridge between us moved, there stood a coyote. Big game in this day and age! And talk about fast moving! C. T. immediately began to shoot. Understand, I say he began, for just as he got a good bead I managed to climb up onto the seat trying to get the old Savage into action. The old boat-tail hit right where the coyote wasn't for he moved just in time. By now I was standing on the seat and working the lever with might and main. Bang! Too far over him. Bang! Better; but how I wish I had some regular loads in the old girl! Bang! Gosh, see him dodge! Bang!



(Continued on page 22)

The Stoeger Rebuilt Springfield Rifles and Stocks

By TOWNSEND WHELEN



IMPROVEMENT in rifles has gone hand in hand with the improvement in our marksmanship, and in methods of teaching that marksmanship. Modern marksmanship suggests that the rifle be held, aimed, squeezed and operated in a certain specified manner, and to prove the value of its methods it points to the fact that there has never been a rifle-shot of note, be he soldier, target shot, sportsman or hunter, who has not used these methods. Now the holding, the aiming and the operating are built up around a certain type of rifle stock, and even the squeezing of the trigger is to a certain extent dependent on this stock. We call it a modern stock; but as a matter of fact it dates back to 50 years ago, and our first International Rifle Match. Indeed, early tendencies to this stock design may even be seen in the earliest English percussion-lock rifles.

Experience in the past few years, since our riflemen have become accustomed to going to custom riflemakers to have their stocks made, because no quantity-production factory furnished such stocks, has quite clearly shown that quite 95 per cent of our trained riflemen require for their best work a stock of just one design and dimensions. In fact, it may be said that the only man that such a stock will not be perfectly suited for is the one who is at the same time very short in stature, with thick chest and shoulders, and short, stumpy arms.

Such being the case, the thought occurred to the firm of A. F. Stoeger, Inc.: "Why not thoroughly standardize this particular stock for the one best rifle in the world, so that all who wish can be assured of having the best without doubt, without trouble and without excessive expense?" So they came to me and asked me to help them to accurately standardize this stock.

The design of a stock involves a whole lot more than merely prescribing dimensions. It necessitates sculpture as well as the use of the rule and dividers. Every single detail, shape, curve, line and fitting had to be prescribed exactly. And the whole assembly had to be considered so that it would be good looking. Every accessory—butt plate, pistol-grip cap, barrel band, sling swivels and fore arm tip—had to be considered most carefully. Everything had to be the very best—each small detail exactly right. It was a bigger job than I thought; but at last it is done; and with this issue of *THE AMERICAN RIFLEMAN* the firm of A. F. Stoeger, Inc., are announcing it.

It could not be quite a proposition of the stock alone, because certain alterations in the Springfield rifle itself were necessary.

These alterations also have been standardized, so that perhaps we had better term the whole weapon a rebuilt modern sporting and target weapon. It is not a cheap proposition, because no one has ever been able to get the very best for nothing. But by standardizing everything, making it all exactly alike, exactly right, by modern machinery, except only the final fitting of wood to metal, which no machine could accomplish with exact precision, the producers have been able to bring out this rebuilt rifle at a very considerably lower cost than it can be done, without lowering the quality and perfection of detail, by the hand-worker.

The stock is made of highly figured imported walnut (usually called Circassian) or less fancy grades, as required. The dimensions are: Length, 13½ inches; drop at comb to just clear cocking piece; drop at heel, 2¾ inches; size of butt-plate, 5½ by 1½ inches; pitch of butt plate, 3 inches; length of fore arm, 10 inches. Other details are pretty well shown by the illustration.

The butt plate is of hand-checked and engraved steel with trap, quite flat, large, so it can be shifted on the shoulder to give perfect cheek contact with the comb and still perfectly support the recoil. The cheek piece is of the type I designed many years ago with rounded edges which do not nick. The comb is thick and correct in shape, so that it gives a perfect support to the cheek to hold the eye steady in the line of aim, and also to relieve the muscles at the back of the neck of all strain. The pistol-grip cap is very large, of hand-engraved steel. The pistol grip is placed just the right distance from the trigger and is well curved, so that the right hand can do its full work of pulling the butt back against the shoulder, and do it with three fingers and the thumb, leaving the forefinger relaxed for perfect control of the trigger. Many stockmakers fail in getting this grip just right, particularly the little finger has a tendency to slide off their grips, and it is that little finger that has to do most of the pulling back in a correct firing position. Also the hand can not pull back without the trigger finger also contributing to the effort unless the hollow of the palm is filled in and supported, and therefore this new stock has been provided with the Wundhammer swell on the right side of the pistol grip.

Those who have not used a stock with this swell will have an interesting experience when they use it. It very greatly improves the hold and the trigger control. Then the fore arm has been given a cross section which is almost circular. This gives a perfect grip for the left hand to steady

and control the barrel without the ungainly shape and contour, and the heavy weight of the beaver-tail.

The sling swivels are of the silent, tangle-proof, instantly detachable type, and the light-shooting gun sling with which my name has been usually coupled (incorrectly, though) is provided. In rebuilding the rifle Stoeger rightly provides the Lyman No. 48 rear sight and gold-bead front sight. The matted-ramp front-sight base has the sight cover secured by a button which, on being pressed, allows the cover to slide off the sight easily. And, by the way, it never was intended that the rifle should be fired with the sight cover on. It prevents exact centering of the bead in the rear sight, prevents the bead from being so clearly visible in poor lights and slows up the catching of the aim. The front-sight cover should only be used to protect the front sight when traveling or on horseback.

Further, the rebuilt rifle has the arsenal marks removed from the receiver if desired, and the upper surface of the receiver ring matted, after which the receiver as well as the barrel are reblued. The knob of the bolt handle is knurled and the rear end of the magazine follower is inclined, so that the bolt can be closed even when the magazine cut-off is in the off position. Any or all of these features may of course be omitted if desired, and it may perhaps here be well to state that in each case all this work is done on the identical Springfield rifle which is sent to Stoeger by the N. R. A. member who in turn obtains his rifle through the D. C. M. in the regular manner. The original rifle may be either the Sporting, National Match, or Service model, the latter two types making up about 6 ounces lighter in weight than the former, but costing a little more because of the necessity of polishing the barrel and supplying the Lyman No. 48 rear sight. The weight of the rifle runs from about 8 pounds 5 ounces, when the Sporting type Springfield is used as the basis for rebuilding, down to about 7 pounds 14 ounces when the National Match and Service types are used. The result of all this is that one can be sure of obtaining a rifle that is free from any mistakes, correct in every particular, with every detail of the best design and workmanship possible; elegant, but absolutely nothing expended for gaudy finish, or for details that do not add to both utility and good looks. The rifle will be found perfect for long- or short-range target practice, for rapid fire, and particularly for hunting.

Old-Time Sharpshooters

By CHAS. ASKINS

I HAVE read Mr. Westergaard's account of Schuetzen men and sharpshooters with a good deal of interest. Since my memory goes back farther than his, with the Editor's kind permission, I'll add a bit to what he has said.

What I have done is not very important. I was so situated that most of my shooting had to be done in private, and I didn't have money enough to attend distant tournaments. My shooting ended about 1898, when I had the misfortune to have all my rifles burned up, together with my home. All my Schuetzen rifles were destroyed, together with a number of sporting arms. Of the rifles, I had one Pope, .28-caliber, loading bullet at the muzzle, Pope fashion, and the barrel placed on a fine Ballard double set trigger action. The rifle weighed 16 pounds, and I have seen nothing equal to it since. The rifle was mounted with a Mogg 10-power scope; and I believe I was one of the first of the Schuetzen men to use a scope, this kind of sight being forbidden when I began shooting, just as it is now by the Free Rifle rules. The Schuetzen men in this country became progressive and decided to permit any sights, just as they should now in free-rifle shooting.

A second rifle of mine was a Farrow, made by Milton Farrow, who at one time had a great reputation as a long-range rifleman. This Farrow was a good shooting rifle, without much appearance; double set triggers, 34-inch barrel, weight 17 pounds, shooting a patched bullet weighing 230 grains. The rifle was cut on a gain twist, which permitted the unusual bullet weight for a .32-40 shell. I ran and patched the bullets myself, using an Ideal adjustable mould, which permitted many weights of bullets. I cleaned between shots with a Fischer brush dipped in water, and of course seated the bullets ahead of the shell with a bullet-seater. I tied Pope with a 94 in four shots on the German ring target with this rifle, but afterwards shot much better with the Pope. The third rifle was a Winchester single shot, No. 5 barrel, set trigger, made by William Bauer. William Bauer was a Schuetzen man himself, a member of the old St. Louis Sharpshooters' Association, and he made the finest set triggers, by all odds, that I have ever seen. That trigger never could be seen to move when it threw the hammer, and could barely be felt; yet it never jarred off. I wouldn't trade that trigger today for any rifle that I know of, other than a Pope.

The fourth rifle, not intended for anything other than practice shooting, was a Stevens, .25-25-100, double set triggers and Mogg scope. This rifle weighed only 10 pounds as mounted with scope, and was shot in the finger-tips position, with the usual padded finger rest attached to the fore end. It was a fine rifle for use at 100 yards. With it, just to tell about something that couldn't

now be disproved, I placed 50 successive shots in a 5½-inch bull at 100 yards, position as stated. A fifth rifle that was nearly as good for 100-yard shooting was a Winchester double set trigger, 30-inch, No. 3 barrel, and the usual Vernier rear and hooded front sight. I used to replace that target front sight with a Lyman ivory bead and use this .25-20 rifle for squirrel-shooting. Of course I loaded my own cartridges, and the bullets cost me about 30 cents a hundred.

I ran all bullets myself, except the .25-caliber 86-grain, making them by the thousand; and along about 1896-97 regularly fired 50 shots a day at 200 yards. Nothing was neglected that I thought would help me, and William Heil, of the Green Tree Brewery, St. Louis, made me a huge copper butt plate, that curled back under my shoulder and widened out under the arm to support it. We used to drop the arm against the butt plate in those days, and never attempted to hold it up even with the shoulder in military fashion. This butt plate alone would add several points to any score, and was far better than anything the present free riflemen are using. The trouble now is that the strain of holding up the arm is transferred to the trigger, and inadvertent let-offs are sure to result.

Now about the old-time Schuetzen men who antedated Mr. Westergaard's day. I won't say much about Dr. Hudson. Everybody knows about him, and I believe he was the greatest offhand shot that ever did live, in this or any other country. But before Dr. Hudson's time there were good shots—as good, perhaps better, than any we have today.

There was a time in the early years of this century when I did not keep very good track of rifle-shooting. I had quit shooting myself, for one thing. A. C. Gould, the editor of *Shooting and Fishing*, had died, along with Jacob Pentz, the greatest reporter of match shooting, either rifle or shotgun, that I have ever known. The Zettler Brothers, who owned the most prominent rifle gallery that America has ever had, where gallery records were made that have never been excelled, either died or quit business, and *Arms and the Man* had not yet taken the place of *Shooting and Fishing*. Military rifle-shooting made great strides, and the military marksmen were not particularly tolerant of the sharpshooters, with their heavy rifles and their "handholts." The military marksmen declared there was nothing practical about the sharpshooters and their methods and positions, which was of course quite true. Then, let me add, the military authorities went to work to develop methods and styles of shooting that were no more practical than those the old Schuetzen men had followed. I had considerable experience in teaching raw men to shoot during the war, and we found it best to teach but

two positions—offhand and parapet rest. Prone positions never were of much value to an army in actual combat, and it is absurd to think that any big-game hunter or any soldier under fire is going to take time to tie down his rifle with a sling fastened above the muscles of the left arm. Military rifle-shooting is just a fine game, and so is sharpshooting with a 15-pound set-triggered rifle.

We won't go into that, but will take up some of the old-time riflemen who existed before Mr. Westergaard's time, and even before Dr. Hudson became prominent. Of these I can recall Michael Dorrlar, Fred Ross, Gustaf Zimmerman, and Harry Pope in the East. Gustaf Zimmerman was an international shooter who made frequent trips to Germany, shooting and winning many matches in that country. Zimmerman was not a top-notch match shooter, but could fire many shots in a day, and under Schuetzen rules, with unlimited scores, could be depended upon to come out close to the top. Fred Ross and Mike Dorrlar shot many matches, and these matches, invariably a hundred shots offhand, were of interest to every sharpshooter in America. Ross usually won, but the sympathy of most men was with Dorrlar, Ross being slightly inclined to nag his opponent. Scores always ran above an average of 220, and frequently above 225. I am sorry that my memory will not permit me to give exact figures, but no finer match shooting has been done in America, and couldn't be now. Harry Pope had occasions when he outshot the best of them; and when Harry was just right he was unbeatable. In the West they had Fred Young and D. W. King, mostly shooting on the Standard target, as well as a good many men of German extraction. I recall one of these men who played a hundred shots into the black at a tournament, and played his three shots into the 25-ring (1½-inch center) at 200 yards. Plenty of men could shoot an average of 22 thirty or forty years ago; and not many more can do it now. It is unfortunate that the old records have been lost. I could have quoted them at one time, but can not now.

Of the men who shot with me, I saw Harry Pope bring up the red flag sixteen successive times, doing the work without apparent effort. Sam Dorman, of St. Louis, was a good point shooter. My introduction to him was when, as a tall, lanky chap whose work I had been watching, he turned to me and showed me a ticket of 54 points out of a possible 60 for 20 shots. The red flag, according to my remembrance, was a 4-inch; the blue an 8, and the white a 12. McBean, of the St. Louis Sharpshooters, was a good match shot, safe to make from 210 to 215 as an average for 100 shots. Horace Kephart was a good shot, but had too much fun to do his best except spas-

modically. Sam Dorman made his own sights, his own set trigger and his own stocks and butt plates, as did many of the others.

I'd like to see the old times come back; and I take the friendliest interest in Mr. Westergaard and the men who shoot with him. I hope that in course of time they exceed all records that ever have been made; and at the least they will set an example to the young fellows who are coming on. The free-rifle shooters are following in the footsteps of the old-timers, but with rather clumsy tools, so it seems to me.

I am enclosing a drawing of a stock and butt plate something like the one I used myself. The cheekpiece is large and slightly hollowed out; the butt plate 3 inches wide under the arm. Slots for the fingers are cut in a wooden block which fills the finger lever, and on the right side is a secure thumb rest, which can not be shown, about midway the depth of the stock. In my shooting the stock, about where shown, came in contact and rested upon the muscles of the chest, being balanced there by the downward pressure on the butt plate. The shoulder was supported by the high, upcurved butt.

In shooting there was no grip to the right hand, which merely hung in place, as supported by the finger lever and thumb rest. If the pulling finger comes in contact with anything other than the trigger, pressure will be exerted at some point other than the trigger, and it will prove impossible at times to tell whether an intended pressure is going to the trigger or the frame of the gun on which the finger may rest, resulting in a delayed or in a premature let-off. It will not do to place the thumb over the tang, because that diverts the direction of the pull, which should be straight back; and at the same time it places a strain on the entire hand. Any grip of the fingers other than the trigger finger will result in a tightening of those fingers. When a quick pull is intended, the shooter will think he is placing force upon his trigger when he is not.

An attempt to squeeze a set trigger, not knowing when the trigger is to yield, is as far wrong as anything that can be imagined. In fine offhand shooting there is no use in attempting to "beat the rifle" by trying to synchronize the let-off with the swing, for the rifle will surely do unexpected things about half the time. Never fire except when the piece is dead on and perfectly still. This hanging dead on the mark will be more or less momentary, but during that moment

the trigger must be pulled. The marksman will soon learn just about how long his rifle "hangs dead," and the pull must not be prolonged beyond that time or the rifle will "get away from him." Get on the mark, start the pull, and if the trigger yields, all right; if it does not, ease up on the trigger, come back on and try again. If the trigger does not yield on the third attempt, take the rifle down and rest. I do not believe in sitting down to do this, for sitting down disturbs the balance as well as the circulation or beating of the heart. Keep the feet in position, and rest the muzzle of the gun on a railing, which should be in front of the shooter. Never pull except when the rifle has "come on" in one set way. For example, if accustomed to get the hold when the rifle has come on from right to left, let nothing tempt you to pull when the rifle has come on from left to right. In my own shooting with the heavy rifles, the big guns swung from bull to the right, up and then down square across the bull, stopping dead at 6 o'clock, when I attempted to pull. Failing to get the shot off I allowed the rifle to make the same swing again.

The heavier the rifle the slower its swing and the longer it will remain at rest at any given point. Recoil is a factor to be considered. I used to watch the lift of my rifle on discharge, and any time it failed to directly cross the bull from 6 o'clock to 12 o'clock, I was afraid of that shot. The '06 cartridge is too heavy for offhand work where dependence is placed upon the weight of the rifle and it is not grouped with either hand. A better cartridge would be a .28-caliber, 175-grain bullet and not too much powder. Perhaps a lighter cartridge would do as well, like the Roberts, with 117-grain bullet; or, preferably, that 7-mm. shell necked to .256, and using the 140-grain bullet.

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ing these off the unwelcome drag is entirely removed.

I also wrote to Mr. Alvin Linden, of Bryant, Wis., whose article in the *RIFLEMAN* of December, 1927, and January, 1928, shows what manner of gun can be produced from the crude material of the as-issued Russian. Mr. Linden most kindly furnished me with elaborate instructions, the essentials of which follow. Some of these he has worked out,

he states, since the writing of his article mentioned.

The difficulty with the Russian action all comes from the principle of the sear and sear spring being made in one piece; wherefore it is impossible, merely by polishing the contact points, to effect a good release. The sear spring is stiff, and there is no take-up except against this determined resistance. The angle of the sear nose as issued bears back against the tension of the mainspring and makes matters worse, the last being not a condition peculiar to the Russian, of course. Mr. Linden advises, first, not to file down the sear nose in order to shorten contact surface, but to work down the contact of the cocking piece instead, if a shorter contact surface is desired. Next, to change the angle of contact in the manner done with other actions, so as to approximate a right angle and remove the back pressure against the mainspring. Then he advises thinning the spring part of the sear piece by filing it down for over an inch of its length, approximately in the middle portion. The filing should be done crosswise, and not of a uniform depth but tapering off at each end of the file cut; then to be polished with emery cloth. On most of these springs, he states, it is safe to reduce the thickness of the spring about half. (My own innovation was to file deeper at the edges as well as toward the middle portion of the spring.) This filing should be done on the under side of the spring as it lies in place.

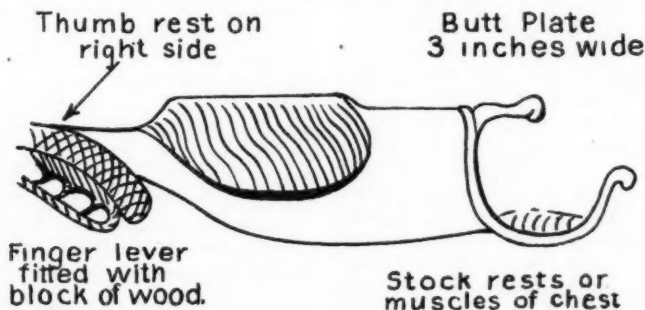
To obtain a perfectly flat surface on the contact—not slightly rounded from the wabbling touch of the amateur—I was advised to get a 15-cent vise from the Wolworth store, fasten the sear nose flush with the vise, and then file down both sear and vise together. Like most simple and revolutionary ideas, it is practical.

The result of this is a trigger pull very crisp and snappy, and without any take-up such as exists on other bolt-actions. It suits me perfectly, although some might be bothered by the fact that the trigger has loose play forward when the gun is cocked. I am impressed by the fact that the instructions produced good results for me the first time I followed them, which demanded a liberal discount to overcome defects in my mechanical education.

Caution is advised, of course, against too much of the thinning process (1) from danger of breakage, (2) because there must be what Mr. Linden calls "sear push"—i. e., tension enough to shove the sear nose up to its original position when trigger is partly pressed and then released without firing—and (3) because increased friction results if the spring is weakened too much. But he emphasizes that the blow of sear nose against cocking piece in rapid fire is a cushioned blow, making breakage less likely.

A further suggestion by Linden is that the use of a Lyman 36 does not necessarily prevent the use of the Russian safety (turning cocking piece to left when drawn back). As

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Telescope Hunting Sight For Pennsylvania Deer

By R. M. KNode

[EDITOR'S NOTE.—This article refers to the 1927 hunting season in Pennsylvania.]

HAVING familiarized myself with the results that I might expect by reading the dope in THE AMERICAN RIFLEMAN from real hunters such as Colonel Whelen, Capt. Charles Askins, etc., I boxes me up my pet Springfield Sporter and sends it to Belding & Mull, Inc., at Philipsburg, Pa., and via the easy-payment plan gets me a 3X hunting scope sight with the T. H. mount attached thereto.

Well, when it arrived at my residence I was very well pleased with the looks of it; but how will it work? was the first thought in my mind. Of course I sallied forth to introduce it to my many hunting partners, and I will say that right there is where I made a great mistake. The comments ran: "What the h— is that thing for?" "It is too heavy." "It will be nice to catch the brush and cause you to lose your religion." "How do you find the front sight?" "I don't think it is worth a d—." "I bet you won't have that d—d thing on your gun next fall," etc., and worse.

Well, I returned me homeward with a heavy heart saying to myself, "bought wit is the best."

But just the same I gets me out my badly depleted purse and sends to the N. R. A. for some of Uncle Sammie's hand-loaded match fodder for my Springfield; and while I am awaiting the appearance of it I miss no opportunity to squint through the sight; and the oftener I looked though it the better I thought it was. And all the time Mr. Chuck was getting more ripe for the grand stew. And then one day the pills arrived.

I fills my Springfield full of them, steals me out the back way and starts me after Mr. Chuck. I sallies down across the meadow, sits me down where Mr. Chuck keeps house, and waits to try out the new sight. Pretty soon Mr. Chuck appears about fifty paces away. He was hard to see with the naked eye, but when I got the sight to work it was a shame to shoot. But shoot I did; and Mr. Chuck crossed the Divide not to return. And about that time Mr. Crow perched himself up on a limb about 100 yards away. The sight again came into use, and the crow was no more good. Now you can imagine about how I was beginning to feel about my new sight. Pretty good, I'll say. I picks me up both the chuck and the crow; struts homeward; tells my chums how it is done, and invites them to get their old smoke-sticks out and we will shoot some mark. But they says, "We can't shoot with you with that picture machine on your gun." I says, "You told me it would not work, so come on till we try it." Some did and some did not; but them that did changed their minds about the sight and said it would be

fine after you learned to use it, but it would take lots of time to learn that.

But wait. The time has not yet arrived when the real trial will take place. I bought it to hunt deer with; and deer season is four months away. But that is all the better, for I need some more experience with it before I go after game like our Pennsylvania deer, for they can run about as fast through the brush as a shadow. During these four months I gets real well acquainted with the use of the sight, and many a chuck and old Jim Crow pass to the Great Beyond through the use of it.

Well, the deer season came on; and Friday, the 1st of December, finds us all in camp ready for the fun. Everybody up bright and early inspecting the sticks, and of course I was the point of some criticizing, or rather the sight was; but the time to start arrives.

Thanks to luck, my brother was captain for the first day's hunt. He said to me, "Shorty, you go out in the old field and watch the crossing." More luck. Well, I goes out to the designated point in the old field, and the drivers were all ready by the time it was legal to begin the hunt. "Ready!" I could hear the words well as the drivers started the chase. I looks around over the surroundings and could see for from 300 to 1,000 yards in most any direction I looked. The drive had not gone far when someone called out loud, "Look out, Shorty, there he comes"; and he was coming in high, as usual. I could see him fully 500 yards away, and as soon as I looked though the sight I saw he was too small—not horns enough. (Must be two or more points to the antler in Pennsylvania.) And how plainly he was visible through the sight when the naked eye could not have distinguished whether he was legal or not at the distance he was away! With the aid of the sight I am sure I could have killed him any time I wanted to, it brought everything out so plain.

But on the second day of the season I was not so lucky as to get to watch a crossing but had to beat the brush. Well, that was all in the game, and it gave me another chance to get accustomed to the sight in the thick brush; and it did me a lot of good, for I did not miss a chance to get my sight in use on every doe deer that I saw. And as does are protected by law you can see them most any time in the woods; and of the dozen or more I saw I did not fail to get my sight on them. The more I practiced the easier it was to get them where I could shoot them. While the brush was of some annoyance at first, you soon familiarize yourself with that; and you can get the game in your sight much quicker than you can with any iron sight, either plain or peep. I

have tried all kinds and the telescope has them all beat.

Well, one of the fellows killed a nice deer about 1 o'clock, and of course we rested a while and started the last drive of the day about 3 o'clock in the afternoon. I jumped two deer in a very thick place, and I could see as soon as they started that one was a fine buck; and as my rifle came to my face the horns were plainly visible, and were legal—not so far away from me but in very bad surroundings—but the sight brought him in plain view. As he ran and I shot Mr. Deer tumbled but got up again. As I shot the second shot he tumbled again, but this time to stay down, with one shot through the paunch and the second through the chest, tearing his lungs and heart to pieces. Well, I walked up to him but he was stone dead when I got there; and was I proud? Sure I was proud of the sight and of the fine specimen he was.

So, brother hunter, if you want something that will give you real sport get a hunting telescope sight and you will be more than pleased with the results. They cost you some real, hard-earned money but they are worth it for sport; and first and last they will be the greatest help in preventing one hunter from mistaking another for wild game and accidentally shooting him. And this one feature is well worth while.

But don't buy one today and expect to be 100 per cent tomorrow. It can't be done. You did not do it with your iron sights and can not do it with a telescope. But the telescope sight is worth the price even though that is high. If you had a good dog you would have a good coop for him; and if you have a good gun get a real sight for it. And if you don't have either, join the N. R. A. and get a real rifle and then get a real sight, and you are all set. The N. R. A. will sell you a Springfield Sporter, and if you can beat it for three times the price I will give you mine.

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issued, the cocking piece strikes against the fixed base of the Lyman, but can be filed out so as to leave room enough to turn to the safety position. By the way, it is a noiseless safety.

Adding a few brief notions of my own: I have observed with the two Russians I have mentioned (one of Remington manufacture, the other Westinghouse) no downward creep whatever of the bolt head, thus eliminating the chief objection to the use of a bolt-head sight. This may not be true of individual guns, but would seem to be worth considering by one who likes a sight on cocking piece. These mainsprings are powerful enough to discount some extra weight.

Concerning ammunition: At the risk of a libel action by the Remington company, I venture the thought that the .308 to .310

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Pacifists and the "Mob"

By F. THEODORE DEXTER

THE super-moralists refuse to face real-life facts; and the officer of the law who knows crime and criminals just as well as crooks know one another, is hesitant to come right out into the open and admit that he has learned to know crooks, by talking with crooks. He is afraid to tell the "holier-than-thou" galleries of legislative assemblies that an officer of the law must know and talk to crooks between jobs in order to get a line on future activities of our under-worlds. And the crook will talk, too. He is either "regular" or a "gay cat"; and if he is regular he will talk his trade with an officer of the law without fear of consequences, for the regular crook knows the distance between suspicion and conviction, and he knows that a square-shooting officer of the law knows when a crook is "resting" and when "working." This writer believes that a little frankness may help to wipe the anti-gun-law film from the eyes of pacifists who are open to conviction.

About three years ago there was a new insurance company building put up on East Eighth Avenue, Topeka, Kans., between Kansas Avenue and Quincy Street. Soon after being opened this building was robbed, and because of the scattered papers left behind by the gang who did the job this writer thought he knew whose "mob" had worked. We will call the suspect "Bud," for that isn't his name. About three weeks ago, while the grand jury was in session in Kansas City, Mo., the writer ran into Bud, standing in front of the Capitol Building and Loan Association Building at Sixth and Kansas Streets, Topeka. I could tell right away that Bud was not working Topeka, and so felt free to talk with him a little. After asking him why he was "resting" in the sticks, and getting this reply, "Ain't you getting all dumb—ask a regular why he toddles with the hicks when the 'grand's' on in K. C.?" I thought to kid Bud a little about the insurance company job. Here's his answer and his story, told as nearly as he told it as I can remember:

"Yea, figured me in on that job, didja, 'cause they was paper on the floor an' I was framed on that Des Moines job? You get your bearings off. What yer swellin' with under that left wing? Rod, an' a thumb-buster, too. 'Spouse yer left yer tin under the piano to home, an' just like the rest o' Kansas hicks yer hopein' to run onto a workin' mob an' spear yerself a lotta hands fer helpin' to put some regular to work pushin' up daisies. Guy sure hates it when they throw away the book on him for drillin' one of these Kansas near-bulls. Sure, I know they burn yer in Missouri fer croakin' a guy, but when yer gets action on a Missouri job yer ain't gonna croak nobody but a bull, and they gets plenty jack fer killin' booze an' regulars. When yer backs outa a lay in Missouri they's only two classes o' good citizens what packs a rod—that's you,

[EDITOR'S NOTE.—*The crooks want anti-firearms laws in every State, to make robbing safer. Are we going to give them the laws? Or are we going to do as they do in Illinois, as told on the next page?*

The anti-firearms "reformers" have the zeal; all they now lack are common sense and a bowing acquaintance with the hard, basic facts in the matter of crime control. This latter, by the way, is a job for real men, and not a pastime for sentimental and impractical effeminism.]

an' the bulls; an' yer don't have to worry 'bout parsons an' school-teachers pluggin' yer with thumb-busters.

"Ain't no mob too smart; but they ain't no real mob dumb enough to figger Kansas lays fer givin' the regulars any breaks, on a stick-up, prowl or soup job. Prowl a love-nest in this burg, an' ten sleeping neighbors goes to plantin' lead tulips in the lawn. Get outa the box safe, an' a lot o' parked cars comes to life an' goes to wholesaling lead-poisoning. Not me for Kansas.

"Where they got them good gun laws the regular gets a quiet break; an' if the racket gets noisy he knows that the bulls are on his trail, an' the only thing that's gonna stop him is a live bull. They ain't no regular gonna squeal 'bout a wild party ending in the show-up room, with plenty dicks around, cause everyone what took a hand in the party gets paid fer what happens, if it happens. It's when some hick bumps into the racket and makes a lucky shot, that the regulars lose their guts. Crooks ain't prepared to take a hand in a village war, an' that's what it sizes when they ain't no decent gun laws to make hicks have gunless days, so a mob can work without meetin' the whole village with rods raring to pop.

"Yea, 'you birds are rarin' ter cage some good mob, an' show what grandpa's old thumb-buster will do; but they ain't no smart mob rarin' to study Kansas long enough ter find out who besides the present population packs a gat. I been countin' the heeled birds that passes this corner in an hour, an' I got it figured that a good mob bumps up agin' ten gats for every hundred hicks what passes. You guys gets a quarter-grand hid in yer socks, an' then packs a thumb-buster ter see that no one makes yer change socks over onct a year; an' while yer not busy worryin' 'bout what yer got ahead, yer worryin' 'bout helpin' some banker hold his, an' croakin' some poor regular fer exercise.

"An' then if a guy gets hooked in a burg that has decent gun laws, his mouthpiece has a chance to flatten out on the jury. Get the idea? Well, 'spouse a guy makes a prowl, an' runs into a gat an' gets juggled. The mouthpiece says to the witness: 'Have you a permit to own a rod?' If the witness don't happen to have a permit, the mouthpiece

puts it up to the jury like this: 'This here witness admits ownin' a rod contrary to law, an' it's easy to see that a lawbreaker ain't got no business testifyin' agin' anyone.' This always confuses the long-whiskers, and makes 'em wonder who they should convict—the regular or the gun-crook just brought to their attention. A guy gets all the breaks where they got good gun laws.

"An' when you run onto Bud's tracks on a Topeka lay, you can lay your coin that Kansas has either passed decent anti-gun laws, or else Bud's got insane worryin' over how many gats gets eaten by rust in Kansas every year. A lotta bulls ain't gonna scare no wise mob off any lay, fer the regular's got it figgered out that bulls is just his everyday problem, an' he figgers 'em in on his handicap. You birds that's hornin' to meet some real mob in Topeka ain't gonna get no action till you give us regulars a break with decent gun laws, so's a guy can tell who's who an' who ain't. Yer got guts, wishin' a mob onto these Kansas bush-whackers! Ain't yer satisfied killin' plenty booze, without hornin' ter croak a lotta poor boys that ain't got no other trade 'cept circulatin' quick money?

"Look at that North Topeka bank job. Half hour after the job was pulled they was a thousand guns counted on the roads out o' this burg, an' only twenty bulls in the crowd. Ain't no mob gonna be able to pull clear o' the Army, an' that job was pulled by a real mob, too. If you hicks has got the guts you let on to have, give us poor boys a break, an' watch us make Kansas regular. Stick up a decent gun law that leaves the rods to home or marks 'em with tin stars, an' the mob will be sizing your good lays inside a week. Regulars ain't too proud ter dig coal for Kansas bulls, but they ain't gonna have the book tossed out the window on them, just to help a lotta hicks get regular target practice; an' when old Bud shows up in Kansas you can gamble that he's here fer the week end, to take in a good sermon; an' no ways hornin' fer no arguments till he knows who he's gonna argue with."

Crooks figure out percentages just as fast as other frenzied financiers, and Bud's little argument against mob chances in Kansas shows that until Kansas pacifists and other snooperettes get into action with an anti-gun law, Kansas won't entertain the best criminal mobs that are now making Missouri and other gun-law States.

NOTE

THE article, "His Day," which begins on page 31 of this issue, is intended for all of our readers. Because it teaches a splendid lesson in clean living, it was desired to bring it to the attention of the Junior members, and it is therefore being published in the Junior section of the magazine.—EDITOR.

Illinois Town Guards Are Guarding Illinois Banks

By FAUN DE COIE

IT SHOULD prove of interest to the publishers, supporters and readers of THE AMERICAN RIFLEMAN to learn the results of the activities of the Town Guards of Illinois in checking bank robberies throughout the State.

The above guard system was organized by the Illinois Bankers' Association three years ago; and in this brief space of time startling results have been obtained. Looking over the records of the years prior to the commencement of the Guards' activities one will learn that in 1924 something like \$300,000 was lost by banks within the State, to bank robbers, while in 1925 the losses exceeded \$325,000. Quite a handsome profit for Mr. Bank Robber.

In 1926, the first year of bank guarding, the losses from bank robberies fell off to slightly less than \$100,000; and in 1927 this figure was further reduced when the losses failed to reach \$50,000. The first eleven months of 1928 showed a total loss of only \$25,500, with only thirteen attempts to rob banks throughout the State. This means that a reduction of some 90 per cent has taken place in the three years that the Town Guards have been active. (To say nothing of the losses to the bank robbers. Certainly these serious-minded gentlemen must be thinking strongly of anti-firearms legislation.)

But here is what the State Bankers' Association says: "Give us three years more and we will reduce the losses to nothing."

Arming a few hundred serious-minded business men conveniently located to cover entrances to banks during business hours has brought about the above results. To further improve the efficiency of the Town Guards the Bankers' Association holds an annual shooting match in which rifle and pistol teams and individual shotgun-shooters are asked to compete. Trophies are awarded to high rifle and pistol teams; and one gold, one silver and three bronze medals are awarded to the five high individuals shooting each weapon. Each county has the privilege of sending one rifle and one pistol team, and

enough shotgun-shooters to bring the total up to five men. Last year (1928) 24 rifle teams, 22 pistol teams and nearly 60 individual shotgun-shooters participated.

It might be well to mention some of the scores made by the high men to show the class of shooting done by these defenders of the States' investments. In the shotgun event half of the competitors broke 21, or better, clay birds out of a possible 25. The "twenty-four" men shot off the tie for the first four places, while a couple of squads of men with 23 targets to their credit battled it out for fifth and last of the medals in this contest.

The rifle match consisted of the following course of fire; 200 yards, slow fire, standing; 200 yards, rapid fire, prone, time one minute; 300 yards, slow fire, prone; all the above on the A target with 8-inch bull's-eye; and 10 shots, 500 yards, B target. Each competitor was allowed two sighting shots for the match and could use them at will, but had to declare them beforehand, so as not to take advantage of a bad shot. High individual rifle was won with a total score of 186 out of a total of 200 points. Some of the high scores at the various ranges were as follows: 200 yards offhand, 44; 200 yards, rapid fire, 50; 300 yards, 49; 500 yards, 48.

The writer is not familiar with the pistol competitions and hesitates to make a guess as to how they were conducted; but judging from the interest shown at the pistol range, the keenest kind of rivalry existed; and it was anybody's match until the last man had fired his last shot.

The Town Guards that have attended one or two State Matches display a great deal of enthusiasm and come all polished up to make a better showing than in previous years.

This is the proper spirit—a spirit that will make the matches a success for years to come as well as have the desired results in training the Guard to shoot straighter and make life more hazardous for the outlaw that earns his livelihood by robbing banks.

watched the little 87-grain bullets kick up dust yards away at every shot, C. T. tried to catch them with the glasses. We couldn't help but wish for the fellow who always hits them at 600 yards; and that with his trusty .30-30!

As the last whippy report cracked from the Savage the coyote glided from view and we wished him luck. Now, taking in the situation calmly, we selected a spot near where the wise one had been. It was a long way off and it took several shots before the boat-tails began to drop into it. The sun was getting low. Gradually the western heavens took on the golden glow. The incomparable frame underneath, the snow-capped Rockies, caused us to be thankful that we had been allowed once more to wonder at the setting of the sun. It seems impossible that any human being can deny the presence of a Creator, a Great Spirit, especially after once beholding His work as demonstrated at sunrise or at the glorious setting behind the Rockies. It is no wonder to me that the Indians had, and have, such delightful tribal stories and legends. Close observers as they were, the vastness, the delightful loneliness, and awe-inspiring grandeur, coupled with the natural phenomena of the country, gave to the Horse Indians these wonderful visions. Man can tear down but he can not create. He may disfigure the face of the plains, but no mere man will ever take the glow from the sunset.

Driving into the setting sun, even into the gloaming, at last we stopped before C. T.'s door. Another day was done. It had been a good day. "So-long, Ted," yelled C. T. as I pulled off down the street, headed for home.

CURING THE RUSSIAN TRIGGER

(Continued from page 20)

bronze-point bullet commercially furnished is incorrect for a .312-.313 groove diameter, according to orthodox American doctrine. But, be it understood, these factory loads do shoot. One groundhog which took one in the guts at about 150 yards just went to sleep, with the granite on his off side all painted red.

I have used the Ideal bullet 308334 with 18 grains of No. 80 with immense satisfaction. The gas check seems to overcome any possible trouble from undercaliber.

My belief is that the real bad news from a Russian muzzle is a special-caliber bullet by Western Tool & Copper Works in front of 54.5 grains of No. 1147. This the Western Tool people sent me when I asked them (following a suggestion by Colonel Whelen in the Dope Bag) for their .303 British to use in the Russian. They advised that it was diameter .3129. It seemed to me a little larger, but took the maximum charge of 1147 nicely. The du Pont leaflet gives 54.5 grains of 1147 as producing 3,015 f. s. with the .30-06 150-grain bullet (in 31-inch barrel). This full-caliber Western Tool bullet ought to go that a little better, and even in the short barrel it behaves impressively, with only moderate recoil.

A Red-Letter Day

(Continued from page 16)

Bang! "Holy smoke, Ted, you nearly hit him that time," yelled C. T. as he saw the dust fly up right at the shoulder of the terrified little beast. By now the wise one was safe, for he was a good 300 yards away and running like mad. C. T. did some shooting, too, but you can not prove it by me how often or where he hit.

The coyote, now running across our front some 500 or 600 yards away, could just be seen flashing along in the sun. Jamming in some full-charge factory stuff I began shooting at him again, just for fun and to see how near I could come to him. I wasn't

fool enough to expect to hit him, for it's too old a game with me. As we two

Who They Shootin
at Anyway?





Conducted by L. Q. Bradley

N. R. A. Feature Exhibit and Rifle Range Popular At Boston Show

SPORTSMEN of the Eastern and New England States who attended the New England Sportsmen's Show at Boston, January 16-26, were greeted with the best sportsmen's exhibition ever held at Mechanics Hall. Besides the rather unusual variety of both small and big game, the excellent exhibits of all types of sportsmen's supplies and equipment, and the educational exhibits sponsored by the United States Government, as well as by national organizations concerned with the conservation of game and the protection of our forests, Mechanics Hall this year presented for the first time a modern rifle gallery and a feature exhibit of the N. R. A.

Located in the center of the main floor and facing one of the principal corridors, the N. R. A. exhibit, featuring the development of the Springfield rifle, attracted thousands of sportsmen. In addition to the very unusual and most interesting Springfield exhibit showing the early developments of the present U. S. Service rifle, the Martini-Springfield free rifle, equipped with the most modern Schuetzen equipment (one of those used by our 1928 International Team), which was taken along to boost the free-rifle game, prompted many interesting queries and amusing suggestions. A vast majority of visitors, as might be expected, had no idea as to just what the big Martini was, but some very freely offered suggestions, the

most amusing of which ran about like this: "What about the machine gun over there? How many times will it shoot?" "What is that 'obsolete gun,' and during what ancient period was it used?" "Is that 'freak' rifle you have there an antique?" But one well-meaning "fisherman" capped the climax when he admitted that he'd heard the rumor about the new .276 Service rifle, and innocently asked if "the big boy over there was 'it'?"

Panels showing the process of manufacture and the finished product concerning commercially available metallic cartridges, both rifle and pistol, provided valuable data to those interested in the most popular loads for all types of rifles and handguns, while the two-man-team match (Nicholson and Johnson) with bull's-eye pistols furnished a daily unique, humorous attraction for all comers. After a few days' practice at targets on the wall, and on any insects that chose our booth for a night's abode, not to overlook the cage of raccoons a few paces down the aisle that furnished excellent practice, "Nick" decided such marksmanship was too easy. It was then that his nervy feat—that of shooting off the little celluloid birds perched on Johnson's ears—was instigated. Those spectators who witnessed this daily "N. R. A. feature and exclusive exhibition" will appreciate, as this writer does, the appropriateness of the usage of the word

COMING EVENTS

(N. R. A. State Secretaries, the Secretaries of State Rifle Associations, N. E. A. Club Secretaries, and others interested are requested to notify the N. R. A. of any matches—Coming Events—that it is desired to announce in this column. Name and class of the competition, place and date should be given.)

Fourth Annual Ohio Rifle League Gallery Matches, Columbus, Ohio, March 22-24.

Railwaymen's Individual Gallery Championship (fired in conjunction with Ohio Rifle League Matches).

Western States Small-Bore Tournament, Los Cerritos Range, Long Beach Rifle Club, Long Beach, Calif., June 21-23.

Northwestern Sportsmen's Show, New Auditorium, Minneapolis, Minn., March 4-10.

Third Annual Sportsmen's and Outdoor Exposition, Public Auditorium, Cleveland, Ohio, March 30 to April 6.

"nervy" above, because it will be recalled that the party of the second part—Mr. Johnson—bore all the earmarks of a Harvard athlete. Moreover, in the judgment of at least one gentleman, friend Johnson with his 200 pounds of athletic development, warrants a chance at the presently deserted heavyweight championship. Boy, page Tex Rickard's successor!

Naturally, the first thought in connection with the rifle range to which the show management gave a most desirable location in the basement of Mechanics Hall was the construction and the type of equipment used. The Caswell range at the Boston Show was constructed under the personal direction of Mr. Arthur D. Caswell, of Minneapolis. Young Caswell brought with him the necessary equipment for setting up one of the modern Caswell Shooting Galleries, and spent most of his time around the range explaining to those interested in the equipment the many features of the sliding targets. Entirely aside from providing an excellent opportunity for sportsmen to try their luck at shooting, using modern rifles, non-corrosive ammunition, and official N. R. A. targets, the Caswell Shooting Gallery at Boston enabled club secretaries and others interested to actually see the latest developments in the construction of an up-to-date indoor range. The N. R. A. considers the Caswell type gallery the best on the market, and for several years the Association has recommended this equipment to organizations interested in constructing modern galleries. Blue prints of the Minnesota University rifle range (another Caswell gallery), are available upon request to anyone interested.

Re-entry Skidoo Matches, in any position, and the New England Individual Championship, which called for 10 shots prone and 10 standing, furnished a sufficient program for individual competitors, while several very good team matches fired in the evenings gave all classes of club teams a chance to demonstrate their marksmanship ability. Hundreds of night visitors to the Sportsmen's Show on the evenings team matches were scheduled, found a real treat in store for them at the range, as the competitions were run off by an official of the N. R. A., strictly in accordance with N. R. A. rules and regulations.



The rifle range used during the Boston show, showing backstop with targets in firing position. Note the "shot-up" planks, indicating plenty of activity

One hundred and thirty-five small-bore expert medals were awarded to those shooters who made qualifying scores in the Skidoo Matches, and the three high in the New England Championship received awards as follows:

Winner—H. S. Hoffman, score 186; silver medal and \$5 cash.

Second—A. D. Caswell, score 184; bronze medal and \$4 cash.

Third—H. G. Keene, score 179; bronze medal.

The first team match, fired Friday night, January 18, resulted in a win for Massachusetts Institute of Technology over Boston University. The Tech team put on an excellent demonstration of good shooting to win by the substantial margin of 105 points. The score was 890 to 785. The course of fire for all team matches was 10 shots prone, and 10 standing, five-man teams, or 5 high scores to count. Three other club matches were fired on Thursday, Friday and Saturday evenings of the following week. The Arlington Rifle Club was nosed out by the Boston Rifle and Revolver Club team on Thursday night. A high-school tournament in which Malden High School defeated three other local school clubs occupied the program for Friday, and a picked team representing the American Legion and Civilian Rifle League locked horns with an "all-State" team in the final match Saturday. Individual scores of the two club matches are available and they are given below. Unfortunately, however, line-ups and scores of the other matches are not at hand:

MATCH ON THURSDAY EVENING, JANUARY 24—BOSTON RIFLE AND REVOLVER CLUB VS. ARLINGTON RIFLE CLUB

Boston Rifle and Revolver Club		Arlington Rifle Club	
H. G. Keene	185	A. E. Keller	177
C. A. Moore	184	A. F. Randall	176
J. E. Greer	175	C. Joseph	176
C. H. Kelley	172	J. C. McGaffigan	174
R. E. Gibson	169	Dr. W. H. Chambers	171
Total	885	Total	874

MATCH FIRST SATURDAY NIGHT, JANUARY 26—SELECTED AMERICAN LEGION SERVICE AND CIVILIAN RIFLE TEAM VS. ALL-STATE TEAM

Selected League Team		Mass. All-State Team	
N. F. Jeffa	184	H. G. Keene	192
H. S. Hoffman	181	J. E. Greer	181
S. J. Burke	181	R. E. Gibson	180
W. E. Brown	175	C. A. Moore	174
Dr. W. H. Chambers	173	J. G. Fall	174
Total	894	Total	901

The Association gratefully acknowledges the interest as evidenced in our activities by hundred of sportsmen who attended the New England Show. We also wish to acknowledge with thanks the co-operation and real assistance of numerous local shooting enthusiasts who were good enough to assist the N. R. A. representatives on occasion of their stay in Boston. The following-named gentlemen were especially generous with their assistance: Messrs. Melvin Johnson and Wing, of Harvard University Rifle Club; Messrs. Howard G. Keene and Chester A. Moore, of the Boston Rifle and Revolver Club; Mr. G. G. Colby, of the Arlington Club, and Mr. Jack Plugge, of Massachusetts Institute of Technology.

GENERAL HENDERSON RETIRES—GENERAL REYNOLDS NOW OHIO ADJUTANT GENERAL

WHEN he turned over the office of Adjutant General, State of Ohio, to Gen. Arthur Reynolds on January 14, the occasion marked the termination of six very successful years during which General Henderson had faithfully served the State as Adjutant General.

Probably the most outstanding of the many accomplishments of particular interest to readers of the RIFLEMAN noted during General Henderson's six years of efficient administration has been the modern improvements made at Camp Perry. With the aid of Congress, coupled with the assistance given by the State of Ohio, the Ohio State rifle ranges and camping facilities at Perry, originally consisting of 521 acres, now are adequately taken care of on a picturesque tract of 1,500 acres. Much might be said of the present modernism of the world-famed camp and range, where the National Rifle Matches are annually held, all of which would reflect commendably upon the administration of General Henderson.

General Henderson is a Director of the N. R. A. and one of the shooting game's best friends. His successor, General Reynolds, likewise is not by any means a stranger to the game, having been actively associated with the Ohio National Guard for many years. Besides being entirely familiar with the National Guard situation in that State, General Reynolds sympathizes with the problems of Ohio civilian riflemen. The Association joins the shooting fraternity of Ohio in greeting with hearty congratulations the retiring Adjutant General, and extends best wishes to General Reynolds for a most successful term of office.

ANOTHER INTERESTING CLUB REPORT

By J. W. HOUGHIN, Secretary Okmulgee Rifle Club

THE year 1928, second year of existence for the Mistletoe Rifle Club of Okmulgee County, Okla., found it holding first place among rifle clubs of Oklahoma, and without question the largest civilian group in the Oklahoma Rifle Association. The membership rolls for 1928 show 63 members paid up, with 49 shooting or active members.

The outstanding event of the year was the entertainment by the Mistletoe Club of the Oklahoma Rifle Association for the annual State rifle and pistol matches, concurrent with completion of Shady Rest rifle range, which is without doubt the finest in Oklahoma. The State Association's third annual matches were held on Shady Rest range June 2, 3 and 4. The range was completed just three days before the matches opened.

Shady Rest actually includes three ranges, the big-bore range, the small-bore and the pistol range. The big-bore takes care of firing up to 600 yards, and situated as it is in the midst of an 80-acre tract is ideally located on the side of a hill which rises several hundred feet above the range proper, thus providing a most satisfactory natural back-

stop. The small-bore range is about 200 yards west of the high-power range. This is for 50-yard and 100-yard small-bore work, the target frames, handling eight target frames each, being constructed of 2-inch pipe. This also is in the timber. The pistol range, with 50-yard and 25-yard facilities, has the same advantages of the other ranges, and is about 50 yards west of the small-bore range. The iron target standards carry eight pistol targets nicely, of the 50-yard size, and more of the smaller sizes. There are benches at 50 yards and 25 yards, just as the shooter finds at Camp Perry. In fact, every effort was made to "go Camp Perry one better" in construction of this range. First, Lieut. R. C. Sanders, of the 23rd Infantry, now in China on duty, inspected the range in May, shortly before its completion, and called it the best strictly civilian range he ever saw.

There were more than 300 men and women in Okmulgee for the third annual Oklahoma Rifle Association matches, at which numerous handsome cups and trophies and about 20 gold, silver and bronze medals were given. The Director of Civilian Marksmanship furnished the State Association with 1925 National Match ammunition for the high-power events.

At the State matches, Elmer C. Croom, executive officer of the Mistletoe Club and captain of the 1928 Oklahoma civilian rifle team, selected his team by actual competition, the first time it ever was done in Oklahoma. Having the largest membership in the State, Okmulgee's Mistletoe Club placed six men on that team of thirteen.

Sheriff John Russell, of Okmulgee County, furnished barbecued meat and the Mistletoe Club provided the rest of the eats to feed that entire horde of State shooters during two days. A vote of thanks to the Okmulgee boys for their reception was tendered at the close of the matches.

When time came for the State civilian and National Guard teams to go to Camp Perry in August, the Mistletoe Club was able to persuade Mayor Dan C. Kenan, of Okmulgee, to send his police chief, Orvel Thompson, to the National Police School at Perry. Since then Chief Thompson has, with the assistance of the Mistletoe Club, persuaded the mayor to purchase new guns and 10,000 rounds of ammunition to enable the cops to learn how to use their weapons. They couldn't before. Doubtless most cops are that way in towns where there are only 20 men on a force, although they probably are better than a vast majority of police in larger cities, at that.

Another thing the Mistletoe Club has to its credit is that so far as we can learn Oklahoma was the only State in the Union whose entire delegation of Congressmen and Senators voted unanimously for the Speaks amendment, which insured holding of the National Rifle Matches each and every year. This is one thing the Mistletoe Club did through the writing of about 300 letters and bringing plenty of pressure to bear. It even caused Senator Elmer Thomas, of Oklahoma, while in France, to take a special trip to Switzerland and there learn how and

why rifle-shooting is one of the best assets of a nation. Senator Thomas is now one of the shooting game's best friends.

This year the first eight men to fire qualified as Experts, and more probably would have but for many interruptions of the firing program. In 1927 only two members made the expert rating.

The merchants of Okmulgee and the Okmulgee Chamber of Commerce, despite the presence of two Quakers on the directorate of the latter body, kicked in nice voluntary contributions during the year for special match events and prizes. These ranged from \$5 to \$50 cash, and one merchant almost had to be clubbed to prevent his posting a medal or prize, or five of them, for every weekly match held.

At some of those weekly matches the Mistletoe Club had as many as 80 shooters, about half of them club members; half non-members who are being coached into membership. The girls of the Young Women's Christian Association organized a rifle club; high-school boys did likewise, and the National Guard unit in the city, although a communications unit, developed a team which was defeated consistently by the Mistletoe Club civilians. The Mistletoe Club conducted five inter-club matches, in some of which more than two clubs participated. These were outdoor matches. The indoor inter-team and inter-club shoulder-to-shoulder matches were far more numerous.

CHALLENGES

Ames Faculty Rifle Club, A. K. Friederich, 101 N. Russell Ave., to States east of the Mississippi, to a standing match under the following conditions: The 10 high scores from Iowa in the standing part of the American Indoor Record Match to count against the 10 high scores from any two States east of the Mississippi in this same match. Eric Johnson, Curtis Liston, Tackhole Lee, have you lost your skill?

Stuyvesant Rifle Club, E. W. Mange, Secretary, Stuyvesant, N. Y., desires matches at 50 feet, 15 men on team, metallic sights, 20 shots, four positions, free rifle, standing.

Lake Region Rifle Club, C. O. Villaume, Executive Officer, Devils Lake, N. Dak., would like to arrange shooting competitions with other tyro teams.

Hartford Police Pistol Team, G. J. Farrell, Chief of Police, Hartford, Conn., would like to arrange telegraphic matches with police teams shooting on a 12-yard range.

HAMILTON CLUB INVITATION MATCHES

A SMALL-BORE re-entry tournament was held at the Hamilton Club of Chicago rifle range on December 21 and 22, 1928. Two matches were fired on a limited re-entry basis. Contestants were permitted to fire 10 10-shot strings, the high three to count for record. Cash prizes were awarded according to N. R. A. schedule. Match No. 1 was a prone match and Match No. 2 an

offhand match. The winners and their scores follow:

MATCH NO. 1, PRONE

1. G. A. Lindgren (5 possibles)	300
2. J. R. Walker (3 possibles)	300
3. Fred Johansen (1 possible)	300
4. W. D. Futell	297
5. C. F. Finch	297
6. J. L. Hedges	296
7. E. L. Lord	295
8. F. D. Wheeler	293
9. W. Mott	293
10. L. M. Felt	292
11. W. H. Damon	288
12. J. C. Peterson	286

MATCH NO. 2, OFFHAND

1. S. D. Monahan	290
2. E. H. La Rue	286
3. C. E. Nordhus	283
4. Sam Kelly	282
5. F. D. Wheeler	269
6. G. A. Lindgren	267
7. C. F. Finch	266
8. K. W. Selander	264
9. L. M. Felt	255
10. Fred Johansen	251
11. J. C. Peterson	248

WEBSTER CITY CLUB DEFEATS SOLDIERS

IN A MATCH between teams from the Webster City (Iowa) Rifle Club and Company E, 133rd Infantry, Iowa National Guard, the club team defeated the soldiers by 15 points. The score was 492 to 477 out of a possible 500.

This is the first of a series of matches planned for the two teams, and all indications are that they will be a success. Forty or more gathered at the range in the basement of the Maxson barber shop to witness the firing last evening.

Neither Maj. Robert L. Fulton, instructor of the Guard team, nor Jack Ziegler, instructor of the Webster City Rifle Club, fired in the competition. As instructors in rifle firing, these two are exceedingly well qualified. Ziegler, as a member of the State civilian team, has taken part in several National Matches at Camp Perry, Ohio, and Major Fulton has attended these National Matches several times as a member of the Guard team.

The firing was on a 50-foot range, with caliber-.22 rifles.

The members of the club team and their scores are: W. G. Wilke, 100; Carl Ermels, 100; Owen Barr, 98; Ralph Tucker, 97; and Courtney Tucker, 97.

Members of the Guard team made the following scores: Lieut. M. J. House, 99; Pvt. James Calkins, 97; Pvt. John Allen, 95; Lieut. E. E. Meller, 94; and Mechanic Elmer Raven, 92.

KEMPER MILITARY SCHOOL RIFLE TEAM HAVING BUSY INDOOR SEASON

KEMPER MILITARY SCHOOL riflemen recently added another win to their lengthy string by defeating Staunton Military Academy, of Staunton, Va. Of a possible 2,000 points, Kemper scored 1,778 to Staunton's 1,777. The one-point margin has led to the submitting of all the targets to the National Rifle Association for an official check.

Kemper this week is swinging into the harder half of its season of more than seventy matches with schools and colleges throughout the nation. During the present

week nineteen competitions will be fired, while next week the schedule includes eighteen more. Last week the cadets participated in thirteen matches.

Scores recently announced give Kemper victories over Massachusetts Agricultural College, La Salle Military Academy, Howe Military School, Rose Polytechnic Institute, New York Military Academy, Boston University, Johns Hopkins University, University of Maine, Fordham University, and Gettysburg College, all by substantial margins. Kemper has to date lost but one match, that to the Pennsylvania State College.

Among the nineteen institutions which will compete with the Kemper riflemen this week are the Universities of Kansas, Missouri, Washington, Michigan, Dayton, Cincinnati, California, Alabama, and Akron; and these military schools: Greenbrier, Kentucky and Morgan Park. Three military academies, nine colleges, and six universities will furnish competitors in next week's matches.

HUSBAND AND WIFE WANT "TWO-MAN" MATCH

J. A. SHAW and Mrs. Shaw, of Dwyer, Wyo., are anxious to arrange a postal match with some shooter and his better half. Mr. Shaw suggests that this challenge might appeal to "some other husband who is lucky enough to have a shooting wife, and does not have to explain why he had to spend that extra dollar for ammunition." The conditions recommended are: Any .22 rifle and any sights; 50-foot range, using N. R. A. official target; and four positions. Anyone desiring to communicate with Mr. Shaw regarding this challenge should address J. A. Shaw, Dwyer, Wyo.

GREATER OMAHA GALLERY MATCHES

THE Greater Omaha Rifle Association is in full swing with their indoor matches at the Omaha Rifle Club indoor range. Shoots are held every week—that is, three nights are match nights and the rest are practice nights, except Saturday and Sunday, on which nights the range is closed. Practically every make of target rifle is used by the different teams, such as the Winchester 52, Springfield 22, Savage N. R. A., Stevens .414, Winchester musket, Peterson-Ballard; but the Winchester 52 leads in numbers. All makes of ammunition are used, both the non-corrosive and the old type.

The following teams are competing for first honors, in both the first and second division class, all being located in the city of Omaha, Nebr.: Northwestern Bell Telephone Rifle Club, Union Pacific Railroad Rifle Club, Omaha Rifle Club, American Legion Rifle Club, Company K, Nebraska National Guard, Creighton University, and Plattsmouth Rifle Club.

Up to date the Omaha Rifle Club's first division team has defeated the American Legion, and the second division team has defeated the Plattsmouth team. The Union Pacific team has defeated the Bell Telephone team. We look for some tight matches among the different teams.

EVANDER MARKSMEN WIN STOCK-EXCHANGE SHOOT

BY AMASSING a score of 988 points on the range of the Crescent Athletic Club, City House, Brooklyn, Saturday, January 19, the Evander Child High School marksmen copped the third annual rifle meet of the New York Stock Exchange. The Bronxmen succeeded Brooklyn Tech and Thomas Jefferson, the two previous winners. The latter team was second to Evander, scoring 984 points.

Evander's squad was composed of Bob Heyert, Jack Savinsky, Mike Cohen, Peter Laterza, Irwin Hogenauer and Vadersen. All but Laterza and Savinsky tallied over 160, with Heyert shooting 177 and placing fourth in the individual standing.

Mike Davidowitz, former Thomas Jefferson star and now captain of the Stock Exchange, won the gold medal for the highest individual score with 181. While Walter Simons, of Richmond Hill, scored the same, Davidowitz was given preference because of a higher tally in the offhand shooting. Frost, of the Stock Exchange, made the only perfect mark of the meet—a 100 in the prone.

Eddie Walsh, Brooklyn Tech captain and P. S. A. L. champion, barely escaped serious injury when a cartridge exploded in his face just as he was getting ready to shoot. He was greatly unnerved by the incident and followed with the lowest total he has made in three years—170.

TOTAL INDIVIDUAL AND TEAM SCORES FOLLOW

Individual standing	
1. Davidowitz, Stock Exchange	181
2. Simons, Richmond Hill	181
3. Demedowitz, Jefferson	177
4. Hayert, Evander Childs	177
5. Rosenblatt, Jefferson	177
6. Lindsay, Erasmus	174
7. Kaslow, Stuyvesant	173
8. Coleman, Stock Exchange	172
9. Flak, Haaren	172
10. Frost, Stock Exchange	170
11. Walsh, Brooklyn Tech	170
12. Wendler, Brooklyn Tech	169
13. Byck, Morris	169
14. Strawinski, Tech	168
15. Mahren, Utrecht	168
Team standing	
1. Evander Childs	988
2. Thomas Jefferson	984
3. Morris	981
4. Stock Exchange	977
5. Brooklyn Tech	974
6. Richmond Hill	960
7. Erasmus Hall	952
8. Jamaica	947
9. Stuyvesant	904
10. Alexander Hamilton	879
11. Manual Training	867
12. Bushwick	2,851
13. De Witt Clinton	828
14. Boys' High	796
15. New Utrecht	757
16. Haaren	702
17. James Madison	646

CHICAGO CHAMPIONSHIP INDOOR RIFLE MATCHES

THE Westric Rifle Club, present holders of the Chicago City Championship, got away to a flying start in the annual indoor small-bore rifle matches with a score of 1,398 x 1,500 for the first stage, 25 points ahead of their nearest competitor. The Centennial Club riflemen punctured the little 5/16-inch bull's-eyes for a count of 1,373 x 1,500 for second place.

The contest is being conducted by the Illinois State Rifle Association and consists of six stages. The course of fire for each stage consists of 10 shots in each of the prone, standing and kneeling positions at 75

feet distance. Heavy-barrel .22-caliber rifles and telescopic sights are used. Trigger pulls must be 3 pounds or over.

An individual championship is at stake in addition to the team competition. This title is now held by S. D. Monahan, of the Ridgeville Rifle Club, who made a bid to hold the honor another year by turning in the high individual score of 289 x 300. E. H. La Rue fired 288 x 300 for second place.

TEAM STANDING

Westric Rifle Club	1,398
Centennial Rifle Club	1,373
Ridgeville Rifle Club	1,367
Bell Telephone Rifle Club	1,359
Austin Rifle Club	1,329
Westric Team No. 2	1,316
Westric Team No. 3	1,241
Bell Telephone Team No. 2	1,203

HIGH INDIVIDUAL SHOOTERS

Monahan	289	Gisler	283
La Rue	288	Felt	283
Norhhus	285	Johanson	282
Greig	283	Cocroft	260

GALLERY MATCH BULLETINS TO APPEAR IN APRIL ISSUE

OFFICIAL bulletins of all gallery matches, targets for which are due in Washington not later than February 10, will be published in the April issue of the RIFLEMAN. It is impossible to run them this time because forms for the magazine close on the same date. Results of the following individual gallery rifle and pistol matches will therefore appear in this section of the next issue:

GALLERY RIFLE MATCHES

Prone Tyro
Tyro Championship
Individual Prone
Individual Sitting
Individual Kneeling
Individual Standing
Gallery Grand Aggregate

COLLEGE AND SCHOOL MATCHES

Individual Scholastic Championship
Individual Collegiate Championship
Individual Military School
Women's Individual Championship

MILITARY MATCHES

Individual Military Championship
Individual .22 Pistol Military Championship

PISTOL AND REVOLVER MATCHES

Tyro Slow Fire
Tyro Rapid Fire
Individual Slow Fire
Individual Timed Fire

DETROIT CLUBS HOLD INDOOR SHOOT

THE first Rifle Indoor Team Match held in Detroit in over ten years was fired Thursday, January 24, 1929, on the range of the Burroughs Adding Machine Co. Fourteen teams of five men each were entered, and some very creditable scores were turned in. The match was so successful that Major Foster has arranged practice matches to be fired under similar conditions on the same range on February 28 and March 31. It is further planned to have an indoor City Championship Rifle Team Match some time in April.

Teams finished as follows:

1. Highland Park Rifle Club, No. 1	846 x 1,000
2. Roosevelt Rifle Club, No. 1	843
3. Detroit Edison Company, No. 1	824
4. United States Post Office	797
5. Burroughs Adding Machine, No. 1	776
6. Roosevelt Rifle Club, No. 2	741
7. Northwestern High School	738
8. Burroughs Adding Machine, No. 2	708
9. Acme Rifle Club	693
10. 106th Cavalry, No. 1	676
11. 125th Infantry	650
12. Detroit Edison Company, No. 2	640
13. United States Marine Corps	636
14. 106th Cavalry, No. 2	430

A pistol practice match open to teams of five from all civilian clubs, military units, and police departments, will be fired February 19, 1929, on the range of the Detroit Edison Co., Willis Avenue Plant, located between Woodward and Cass Avenues, beginning at 8 p. m. Any pistol or revolver may be used.

The rifle team match fired January 18, 1929, was won by the United States Post Office with a score of 754 x 1,000 against 746 x 1,000 for Roosevelt.

INTERNATIONAL TEAM CONTRIBUTIONS

Amount of contributions previously received	\$32.00
Daniel G. Levee, Dutch Flat, Calif.	2.00
William Almy, Newport, R. I.	4.00
Gorton Lippitt, Wickford, R. I.	5.00
Stuart B. Miller, Marquette, Mich.	5.00
John Wick, Chicago, Ill.	5.00
Leo H. Beintema, Davenport, Iowa	1.00
A. E. Michelson, Yumbrota, Minn.	1.00
J. M. Wilson, Hemet, Calif.	5.00
Dr. Albert M. Grant, Hanover, Pa.	2.00
Jack N. Schuh, Chicago, Ill.	1.00
William T. Moshier, Brooklyn, N. Y.	2.00

Total..... \$65.00

"PEPPING 'EM UP; OR THE TALE OF A SATISFIED SECRETARY"

Time—Any old time.

Place—Any city, town, village, or hamlet in these United States.

Characters—A hard-working club secretary. Spirit of the National Rifle Association, speaking through its Secretary.

ACT I. ACTUAL LETTER FROM THE CLUB SECRETARY TO THE N. R. A.

GENTLEMEN:

It's a disgrace to have to tell you and your Association just how little has been accomplished during the last year by our club, but I'm going to make a full confession of all we have and haven't done and try to derive some benefit from it and from your knowledge of teamwork, co-operation and success for such an organization as ours.

In our storeroom are some odd thousand rounds of ammunition, mostly .30-caliber, which we were given last year. There must be five or six cases. We have plenty of .22-caliber ammunition to last until the first of the year. We have six or seven Model 52 Winchesters privately owned, besides two owned by the club, and also two muskets from the N. R. A. We have over a hundred members on the list and about a hundred dollars in the treasury. We have the co-operation of the Blank Railroad, who seem to be willing to go as far as we want them to in order to help us out, but the kind of help they can give us is what we have enough of already. What we need is leadership, interest, and a knowledge of how to make 'em come out and shoot and want to come. I'm sick and tired of calling them on

the telephone, and I know they are tired of hearing me beg and plead for attendance. Weekly, all through the past summer I called all I thought would need to be reminded to tell them to come out tomorrow morning and shoot, and I'd have about five or six. I wanted to get them out so they could learn to shoot well enough to enter competition among ourselves and the near-by Blank Rifle Club, or others, but only a few can shoot Marksman. I took care of the guns, ammunition, targets, membership, money, and secretary's job. No one was enough interested so that I could depend upon them to help willingly and always be there. I'm not kicking about that, though, if only we had accomplished something. We only have a small outdoor range. The country is so level it's hard to find and get anything very suitable. The closest hill of any size is about 15 miles away, and they hated to go that far to shoot an hour or so. We did, however, rig up a team good enough to go to the State Vigilante Shoot in September, but naturally didn't get very far. I think we were in twenty-second place out of the eighty teams registered.

Our last winter's indoor shooting was held weekly and regularly on Thursday evenings. The attendance was barely fair and the program *rotten*. We'd all shoot around twice, trying to improve, and by that time it was time to go home. Our instructor is a good shot. He can qualify as an expert rifleman. He's also president of the club and a hard worker; but the reason our indoor shooting doesn't go over is for lack of program. Our indoor range is only 60 feet long, and four can shoot at once. For this reason we could not enter the postal matches last year; but have a promise of getting our range made longer, so that we can shoot the regular distance of 75 feet, and then can enter the matches.

Our actual membership has greatly increased, but not our active membership. Most of the members are interested in short-distance shooting, under 100 yards, with the 52 Winchester. There's an annual railroad meet in which they compete with other railroad teams. My crowd is interested in .30-caliber shooting and are the regular attendants in the summer time. We own our indoor range, but are donated a small tract for a 200-yard outdoor range. We have no meeting place other than the ranges. We maintain regular shooting meets weekly. So far only our own members are present, and no competition of any form. We have no definite program. *That's what we need.* They would probably be interested in the postal matches if our indoor range was standard size, as I explained.

Well, I've rambled on so long you should surely be able to see that something is drastically wrong with us. I rather imagine we are better situated than most clubs as far as having the necessary equipment and assistance is concerned. The only thing in equipment we lack is ranges; but we'll get that soon, I think.

Will you now please be good enough to write us a letter—one that I can read to

them—diagnosing our case, if you can, and tell us what to do. What kind of competition shall we have among ourselves at first to bring out the members? What kind of a prize, if any, should we offer? Should I send them all THE AMERICAN RIFLEMAN? Should we appoint all new officers if we can find them? Or should we keep plugging away not accomplishing much? That's asking a great big favor of you and quite a job also. We know you're busy, but it looks to me like we'd go on the rocks pretty soon if something didn't come to our rescue. That's why we must bother you.

I think we are all willing enough if we were *all* interested; but when a handful are the only apparently active shooters, no one is willing or cares much. So, if you can line us up, we'll try and, I think, succeed.

Curtain

ACT II. A FEW DAYS LATER. ACTUAL LETTER FROM THE N. R. A. TO THE CLUB SECRETARY

DEAR SIR:

There is no doubt but that you have placed your finger on the difficulty in your rifle club. With a considerable number of members on the roll, money in the treasury, ammunition in the locker and a 50-foot range indoors, you certainly have all the material requirements for a strong club, with the exception of an easy-to-get-to outdoor range. I think that the latter problem is probably best solved by the installation of a .22-caliber range and a pistol range, leaving the .30-caliber out of the picture.

None of these things are any good without the right kind of leadership. The active, interested officers must get together, do the work, arrange the programs, get the shooters out, meet the newcomers and make them at home on the range and generally keep things going.

The civilian rifleman can not be handled like a soldier in the Army. The civilian shoots for the fun of it, and unless he can have fun shooting he will play golf or go to a baseball game or go fishing. Maybe that is one thing that ails your club. You have worried too much about instruction and qualification and practice and not enough about getting all the fun out of the game that there is in it. I'll bet there are a number of reloaders in your vicinity. Do you ever have any matches with reloaded ammunition only? Have you ever tried Shoot-Your-Own-Lunch Matches, or Junk Shoots, or Kickers' Handicap events? Have you ever had teams from near-by clubs visit you, with the ladies of your club serving a little buffet supper after the match? Have you ever tried a Field Day at the range on the Fourth of July or Armistice Day or some similar occasion, with bait-casting, potato races, shotgun-shooting, etc., in addition to rifle-shooting? Have you ever tried gathering up all the extra saucers on the pantry shelves of the various club members and having a match at breakable targets?

Instruction and practice and qualification are all very well, but you have got to give

them to the civilian in small doses. He has got to want instruction and want practice or he will not be interested in it. He has got to have some investment in his shooting equipment. No club, in my experience, which depended on the issued equipment, with the secretary or executive officer carrying it home every night and cleaning it up and keeping it until the next shoot, has ever lasted more than two years, and it never did anything in those two years. A fellow may have only a \$1.50 Krag; but it is his rifle and he paid \$1.50 for it, and he wants to get his money's worth.

As to your indoor range, you do not need 75 feet in order to participate in N. R. A. matches. All N. R. A. competitions are divided into a 50-foot section and a 75-foot section, with identical medals and prizes in each section. If you have a gallery 60 feet long, move up your firing point 10 feet and you will have all that is necessary to participate in the entire N. R. A. gallery program.

As to the prizes, the kind of a prize that you give for a shoot makes practically no difference in so far as attendance and interest are concerned. I have seen just as big a crowd out shooting for a chocolate-layer cake baked by Mrs. Jones as would come out for a gold medal awarded by the president of the club. As a matter of fact, little things like layer cakes or doughnuts or a boiled ham or a half dozen cups and saucers are generally more effective in the long run in building up a club than are a lot of medals and cups. When hubby brings home something that the wife can enjoy, he has lots less trouble getting out to the range next week than if he merely takes home a medal that isn't of the least bit of assistance in buying the baby a new pair of shoes.

One other point: Don't try to make all your members shoot prone or don't endeavor to make them all shoot standing. Don't try to persuade them all to shoot the .22, and don't try to insist that they all shoot the .30. Different men have different ideas in regard to what kind of shooting gives them the most enjoyment. Let me repeat: they shoot for the enjoyment they get out of it. Of course, in a small club you can not run a prone match and a standing match and a .22-caliber match and a .30-caliber match and a pistol match and a breakable-target match all at one time; but you can run a .30-caliber match one week and a .22-caliber match the next week and a novelty match the third week, etc. What you want and what we want is to get people to shoot. If they like to shoot one way and don't like to shoot another way, what of it? Make them happy. A look at the N. R. A. Program which I am sending you under separate cover will indicate how we attempt through the provision of matches of every description to take care of everybody.

This is not exactly a letter that you can read to the club. It is as rambling as your own, but if it paints as good a picture for you as your letter painted for me, it should do the club some good. I would like to

hear from you frequently in the future as to how things are going.

Curtain

ACT III. SIX WEEKS LATER. ACTUAL LETTER FROM THE CLUB SECRETARY TO THE N. R. A.

DEAR SIR:

It's not as hard to write this letter as it was the last one I wrote to you, because I won't have to tell such a pitiful tale.

Since receiving your letter telling us to forget drilling our shooters and do more in an entertaining way, we have had wonderful success each week. Every week a letter was mailed to each member of the club telling him just what was in store for him on the regular shooting night in the coming week. And we always had a program of interest, it seemed, for the room was filled and it made quite a job taking care of everyone. We have had poultry shoots, lunch shoots, moving-target shoots, and Christmas we had a turkey shoot (an idea we got from THE AMERICAN RIFLEMAN, and carried out in the same manner, except we doubled our money and didn't have another turkey). Everyone enjoyed these shoots, and we had members out that had not been out before. And I think there'll be no trouble collecting 1929 dues.

Enclosed is our check for \$10 for annual club dues.

We wish you and the N. R. A. another prosperous and happy New Year.

Curtain

MORAL: Give your club a thorough analysis, and if the results are not satisfactory, let us help you change the chemical content.

SEA GIRL CLUB LEADING RIFLEMAN TROPHY COMPETITION

EARLY returns from clubs already entered in the recently announced American Rifleman Trophy Match give Sea Girt (N. J.) Rifle and Pistol Club a lead of five points over the Lincoln Rifle and Pistol Club, of Lincoln, Nebr. Merle Simpson, secretary of the Sea Girt outfit, and E. M. Hoskinson, Lincoln Club leader, are captaining their respective teams in the Rifleman Trophy Match. Having hopped off to an early start, these teams bid fair to give a good account of themselves in the all-year race for the two beautiful trophy cups and other valuable prizes being offered by THE AMERICAN RIFLEMAN magazine and the National Rifle Association, in accordance with prize conditions of the competition.

Prize conditions as well as cuts of the two handsome cups to be awarded are shown below. The cuts give only a vague idea of the beauty of these trophies, however. Rifle club secretaries who have not already done so will do well to delay no longer in entering the Rifleman Trophy Competition. When you ask for a supply of American Rifleman Trophy Match entry blanks, your club is automatically entered in the match. Read

over the conditions below and write at once for a supply of these entry blanks. Don't pass up this opportunity to help your club help itself.

Conditions of the match follow:

THE AMERICAN RIFLEMAN TROPHY COMPETITION

UNLIMITED RE-ENTRY

Open to—Any rifle club affiliated with the National Rifle Association and in good standing.
Dates—January 1 to December 31, 1929.
Entries Close—Entries may be made at any time during the competition.
Course and Conditions—Points will be scored on the following basis:

For subscriptions to THE AMERICAN RIFLEMAN from club members or life members, at \$1 1 point
For applications for individual membership which includes THE AMERICAN RIFLEMAN, at \$3 3 points
For applications for life membership, which includes THE AMERICAN RIFLEMAN for one year, at \$25 25 points
For applications for endowment membership, which includes THE AMERICAN RIFLEMAN for life, at \$100 100 points
For individual entries in postal matches, at \$1 1 point
For individual entries in postal matches, at \$1.50 1½ points
For team entries in postal matches, at \$5, 5 points

In the case of memberships and subscriptions, points will be allowed only for new subscriptions and new annual memberships. In order to be classed as new, subscriptions or memberships must have been lapsed prior to January 1, 1928. Any subscriptions or memberships received from men who have not been subscribers or members since January 1, 1928, will be considered as new and points will be awarded.

Special Blanks Required—In order to be scored, applications and subscriptions must be submitted on the special American Rifleman Trophy Match entry blank, quantities of which will be furnished competitors without cost. Entries in matches must also be submitted attached to such a blank.
Arm, Ammunition and Position—Any kind of arm or arms, ammunition or position necessary to persuade good, honest American citizens to subscribe for THE AMERICAN RIFLEMAN or become members of the N. R. A. are permitted in this competition.

Prizes—To the club having the largest aggregate score will be awarded The American Rifleman Trophy for annual competition within the club or for donation by the club to a State or regional competition with the rifle or pistol.
To the secretary of the winning club, a life membership in the N. R. A.
To the second high club, a smaller American Rifleman Trophy and a life membership to the secretary.

In the case of winning secretaries who are already life members of the Association, the life membership will be given to whomever the secretary may designate, provided such person meets the membership requirements of the Association.
To the third high club, merchandise selected at will from the price list of the N. R. A. Service Company to a value not exceeding \$30. To the secretary of such club, \$10 in gold.
Consolation prizes to all clubs scoring 100 or more points.

Entrance Fee—Some interest and enthusiasm.
Official Bulletins—Official bulletins showing the standing of competitors will be published monthly in the N. R. A. News Section of THE AMERICAN RIFLEMAN magazine.

EDITOR AMERICAN RIFLEMAN.

DEAR SIR:

Congratulations on obtaining the splendid article by C. T. Westergaard, which appeared in the January issue.

Modesty has compelled him to make several omissions. He won that Pope muzzle-loader of his at that first shoot he attended when he was only 16. In 1924 he beat all the members of the International Team standing at 300 meters. That stunt of his of winning a championship and a bride at the same time was some stunt. Wouldn't a story based on that fact be some yarn? I feel tempted to try it.

The offhand game is the king of them all. I say it whose strong point is four positions. If the N. R. A. really wants a winning International Team they should come

out to Iowa and teach these offhand shots how to shoot kneeling. I can take the three Altman brothers, Westergaard and myself and give any five riflemen east of the Mississippi all the shooting their little hearts desire at the free rifle game.

Yours truly,

ALFRED K. FRIEDRICH.

P. S.—The writer is one one of the few who have made a 3-shot possible on the German ring target, though I did not do it in the Honor Match. My score in the 5-shot match was as follows: 25, 25, 25, 18, 23.

A "BIG" NEWSPAPER MAKES A DISCOVERY

(Continued from page 6)

missioned because that was one way they could get a permit to carry concealed a pistol or revolver. Discover who gets the money which is paid by these deputy sheriffs for their warrants. Unearth the facts as to how much these deputy sheriffs have to pay for their nickle badges of authority and who gets the profits from the badges. Tell the public of Chicago and the United States just why men arrested with guns are able to get "bail, continuances, trials when prosecuting witnesses are not present," etc. Explain why it is apparently easier on the criminal if he kills a policeman and gets away than it is if he is arrested by the policeman for some trivial offence. Find out why there have been seventy-two gang killings in Chicago in the past four years without a conviction, and in most cases without an arrest. Find out just how it happens that the percentage of unsolved murders in Chicago is so high. Find out why it is that in a city noted for its shooting affrays policemen with families to support are sent out after gangsters day after day and night after night without as much target practice as is given the C. M. T. C. student in fifteen days of summer training.

Ordinarily THE AMERICAN RIFLEMAN does not feel inclined to give publicity to newspapers of the type of *The Chicago-American*, but this present campaign with all its hysteria, all of its uncovering of "facts" which everyone except the newspaper editor has known for years, all of its agitation for the disarming of the honest American citizen, is so typical of the general campaign which is being carried on throughout the United States by the little editors of "big" papers, by the pacifists, by the communists, that we feel that in answering the blurbs of *The Chicago-American* we are replying to all similar campaigns throughout the United States. It is true, of course, that the pages of *The Chicago-American* on which most of this material appears are of a tint between an orange and a yellow. Perhaps that is a partial answer to the question, "Why such a campaign?" In the case of other newspapers carrying on a similar campaign, but lacking the supply of tinted paper used by *The Chicago-American*, it is probably true that a broad streak of the same shade may be found extending the length of the backbone of the editor.



(A Unit of the National Rifle Association devoted to teaching every boy and girl in America the safe and accurate handling of the rifle.)

Conducted by H. H. Goebel

National Individual Championship Match April 29 to May 11

THE announcement of the National Individual Championship Match should be of interest to every individual and club member affiliated with the Corps. Practically two months away, there is ample time to make preparation and get in harness for this event. It is the last of the individual contests to be conducted this year other than the National Shoulder-to-Shoulder Individual Championship, which will be conducted at the National Matches at Camp Perry, Ohio. This will be your opportunity to demonstrate your skill and training with the rifle.

By conducting the match in the prone position only every affiliated member is placed on an even basis for the championship. There are thousands of boys and girls affiliated as individual members who compete yearly for individual qualifications. With this experience they now have an opportunity to compete for a national championship. This, too, applies to many club members affiliated with schools, Y. M. C. A.'s, Boy Scouts, churches, camps or independent rifle teams who have never entered a national competitive event but have fired among themselves for standing and qualification.

Just as you have found each step in the medal course a bit harder but at all times meeting the requirements, you will be surprised to learn what good scores you can make through competition. Even if you don't win you will be satisfied that you have done your best, and that you will help the game because with more members competing the more the title is going to mean.

The entry fee for this match is but 25 cents. Entries may be submitted now, and special targets printed on heavy tag will be mailed all competitors. First, second and third prizes will be awarded as well as a trophy for first honors and the title of National Individual Champion of the N. R. A. Junior Rifle Corps for 1929.

RULES FOR NATIONAL INDIVIDUAL MATCH

Open to—Any individual or club member of the N. R. A. J. R. C. who has not reached his nineteenth birthday.

Targets—Official N. R. A. J. R. C. 2 to 10 count, five bull's-eye targets will be fur-

nished for the match. No other targets will be accepted. The information requested on each target must be fully given.

Conditions—Forty shots prone, fired in four strings of 10 shots each—2 shots in each bull's-eye.

Sighting shots—No sighters allowed on record targets. Sighting shots may be taken on practice targets before firing match.

Rifles—Any .22-caliber.

Ammunition—Any rim-fire .22-caliber.

Sights—Metallic.

Distance—Targets must be 50 feet from firing point outdoors or indoors.

Range—Any safe 50-foot range.

Entrance fee—Twenty-five cents.

When fired—April 29 to May 11.

Entries close—May 4.

Witness—If a club member, targets must be witnessed by the instructor or someone appointed by him. If an individual member, by a responsible adult.

Targets in Washington—On or before May 18.

Prizes—Gold, silver and bronze medals to the three high.

INTERSCHOLASTIC TEAM MATCHES

You will have to act quickly if your team is to be entered in the scholastic matches that are being conducted this month. Instructors of all affiliated Junior clubs have been provided with the gallery and outdoor program, and if your team has not made an entry we suggest that you approach your instructor and remind him, for all returns must reach Washington on or before April 1.

The Girls' Interscholastic Team Championship is open to one or more teams from any public, private, high or preparatory school affiliated. Each of three stages consists of two sighting shots and ten shots for record, prone. Teams consist of not more than ten, the five high scores at each stage to count for record. The winning team receives the title "Interscholastic Rifle Champions, 1929—Girls' Division" and five silver medals. To the second and third teams bronze medals. Percentage medals.

The Military School Team Championship, open to one or more teams of not more than ten from any military school affiliated,

will consist of four stages. Each stage must be completed in one day, consisting of two strings each of two sighting shots and ten shots for record fired in the following order: First stage, two strings prone; second stage, one string prone, one sitting; third stage, one string prone, one kneeling; fourth stage, one string prone, one standing. The winning team receives the title "Military School Champions for the year 1929," the Military School Indoor Trophy and five silver medals. Bronze medals to members of second and third teams.

The Interscholastic Team Championship is open to one or more teams of not more than ten from any public, private, high or prep school other than military affiliated. Each stage completed in one day consists of two sighting shots and ten shots for record fired in the following order: First stage, two strings prone; second stage, one string prone, one kneeling; third stage, one string prone, one standing. To the winning team the title "High School Gallery Champions, 1929," the Inter-High School Indoor Trophy to be held for one year and five silver medals. Bronze medals to members of second and third teams. Percentage medals.

The team entry in each of the above matches is \$5, and all returns must be in Washington not later than April, 1929. Act quickly and give your team the opportunity to compete for national standing.

BIWEEKLY MATCHES

THE entries for the second series of bi-weekly matches increased from 68 teams in the first series to 80. The matches now take on a national aspect, as 21 States and the District of Columbia are represented. These entries reach from coast to coast and represent 56 institutions.

The plan of matches in three short series includes three divisions, in which the three high teams in each division during a series are awarded cup trophies. These divisions are determined by the five-man-team scores, and teams are allowed to advance to higher classification, depending upon whether their scores warrant the advancement. The improvement in individual and team scores has been noticeable, and the classification or divisional scores for the second series have advanced to keep the program in line with the team advancement. The classifications during the first series were based on the following scores: 460 through 500, Division A; 430 through 459, Division B; below 430, Division C. These divisional scores for the second series have been advanced to the following: 480 through 500, Division A; 460 through 479, Division B; and below 460, Division C. This arrangement places the better shooting teams in a division by themselves, giving the intermediate teams something to shoot for, and also giving inexperienced outfits highly competitive classification for themselves.

In the first match of the series completed 68 teams submitted returns. Eleven teams came within the A Division rating, led by Fresno High School's first team, of Fresno, Calif. This team has to date placed first

in all of its matches. The first team of Kemper Military School, of Boonville, Mo., and Fresno High's second team tied for second honors with 491 apiece. Fourteen teams comprised Division B, led by the first team of the Lewis and Clark High School, of Spokane, Wash., with a score of 477. The Richmond Hill High, of Richmond Hill, N. Y., and Ridgewood High's first team, of Ridgewood, N. J., tied for second with 476.

The first team of the Centennial High School, of Pueblo, Colo., a newcomer in the matches, the Eugene High School, of Eugene, Oreg., and the second team of the Cameron Junior Rifle Club, of Alexandria, Va., all tied for first honors in Division C with scores of 458.

The standing of the teams changed considerably in the second match. Fresno High's first team, however, continued to lead the way, taking first honors with a team possible of 500. This is the first possible to be submitted in the 1928-29 series of biweekly matches. The five-man-team score follows:

Lester Jeffreys	100
Jack Bartram	100
T. Hudson	100
Edward Foy	100
Donald Quilivan	100
Total	500

Kemper Military School's first team and the second team of Fresno High again tied for second honors with 489.

Three of the B Division teams submitted scores of Division A rating. Ridgewood High's first team leading the group with a score of 483 was followed by the first team of Lewis and Clark High and the first team of the Hyde Park Department Y. M. C. A., of Chicago, Ill., with 481. These teams have been given credit for their standing in this second match as Division B teams, but will compete as A Division teams during the remainder of this series.

Seven teams entered in the C Division are also to move up into keener competition for the remainder of the series. The third team of Kemper Military School with a score of 479 led in this division. The second team of Malden High School, Malden, Mass., placed second with 476, followed by Crosby High's first team, of Waterbury, Conn., with 470, the John Marshall High School, of Richmond, Va., with 469, the fifth team of Kemper Military School with 465, the first team of Centennial High School, of Pueblo, Colo., with 461, and the second team of the Cameron Junior Rifle Club, of Alexandria, Va., with 460.

BULLETIN NO. 2—BIWEEKLY MATCHES— SECOND SERIES

* DIVISION A (480-500)

	Score	Pts.	Total	Total 2 series
1. Fresno High 1st,	500	300	600	2,400
2. Kemper Mil. Sch., 1st,	489	270	540	1,890
3. Fresno High 2nd,	489	270	540	1,350
4. Warren Harding High,	488	240	420	1,620
5. Cameron J. R. C. 1st,	486	210	420	1,540
6. Porterville Union High, 1st,	386	210	300	450
7. Turlock Union High, 1st,	486	210	360	780
8. Tamaulipas High,	485	180	426	1,170
9. Western High, 1st,	481	150	270	1,590

10. Malden High, 1st,	474	120	210	500
11. Western High, Girls, 1st,	464	90	180	450

DIVISION B (460-479)

	Score	Pts.	Total	Total 2 series
1. Ridgewood High, 1st,*	483	200	380	1,140
2. Lewis and Clark High, 1st,*	481	180	380	920
3. Y. M. C. A., Hyde Park Dept., 1st,*	481	180	340	1,150
4. New Trier High,	479	160	160	910
5. Blodgett Voca. High, 1st,	477	140	300	660
6. Blodgett Voca. High, 2nd,	477	140	280	790
7. Centennial J. R. C.,	476	120	180	180
8. Washington University,	476	120	260	260
9. Greenbrier Mil. Sch.,	475	100	280	320
10. Richmond Hill High,	474	80	260	1,070
11. Western High, 2nd,	467	60	220	220
12. Evanston Township High,	464	40	180	750
13. Old Pueblo J. R. C.,	462	20	20	20
14. Episcopal Academy,	456	...	80	80
15. Polytech. Prep.,	455	...	160	160
16. Turlock Union High, 2nd,	445	...	100	100

* Division A teams beginning February 9.

DIVISION C (BELOW 460)

	Score	Pts.	Total	Total 2 series
1. Kemper Mil. Sch., 3rd,*	479	100	160	160
2. Malden High, 2nd,*	476	90	180	1,030
3. Crosby High, 1st,*	470	80	110	370
4. John Marshall High,*	469	70	150	430
5. Kemper Mil. Sch., 5th,*	465	60	150	150
6. Centennial High Sch., 1st,*	461	50	150	150
7. Cameron J. R. C., 2nd,*	460	40	140	600
8. Malden High, 3rd,	459	30	30	370
9. Bonita Union High,	456	20	100	350
10. Ridgewood High, 2nd,	456	20	60	60
11. Eugene High,	455	10	110	140
12. Lewis and Clark High, 2nd,	453	...	70	540
13. Technical High,	453	...	10	10
14. Central High,	451	...	...	...
15. Hillhouse High,	451	...	...	...
16. Porterville Union High, 2nd,	450	...	70	520
17. Kemper Mil. Sch., 2nd,	446	...	...	270
18. Wilby High,	446	...	...	...
19. Western High, Girls, 2nd,	445	...	...	...
20. Kemper Mil. Sch., 4th,	441	...	...	...
21. Logan County Indus.	441	...	20	20
22. Upper Darby High,	440	...	...	...
23. Morgan Park High, 1st,	438	...	10	10
24. Central High,	435	...	...	300
25. Calif. Mil. Acad.,	434	...	...	...
26. Y. M. C. A.,	434	...	...	...
27. Centennial High, 2nd,	432	...	...	...
28. Cheyenne High, Girls,	430	...	30	30
29. Winfield High,	426	...	...	180
30. Morgan Park High, 2nd,	425	...	...	...
31. Y. M. C. A.,	421	...	50	50
32. Great Falls Y. M. C. A.,	419	...	...	240
33. Bronxville High,	416	...	...	...
34. Watertown High,	415	...	...	...
35. Blodgett Voca. High, Girls,	413	...	...	130
36. Blodgett Voca. High, 3rd,	404	...	40	480

37. Crosby High, Girls,	401	...	...	80
38. Ridgewood High, 3rd,	400	...	...	...
39. Palo Alto Mil. Acad.,	383	...	...	130
40. Morgan Park High, 3rd,	365	...	...	...
41. Crosby High, 2nd,	458	...	...	110
42. Cranford Scout R. C.,	350	...	...	...

* Division B teams beginning February 9.

RICHMOND HILL HIGH PROCLAIMED NEW P. S. A. L. CHAMPIONS IN RIFLE-SHOOTING

THE Richmond Hill High School, of Richmond Hill, N. Y., captured the P. S. A. L. Fall-Winter Championship from the defending title-holders from Brooklyn Tech High School, at the General Wingate Rifle Range in Brooklyn. The winners broke all previous records when they reached the total of 1,067 points out of a possible 1,200. Brooklyn Tech led the Queensboro marksmen a lively battle and succeeded in tying Richmond Hill in the team total with a duplicate score of 1,067. The Hillers, however, were conceded the victory because of a higher mark in the standing position—392 against 388.

In finishing third Erasmus Hall High School, high scorer in the qualifying rounds, also combined a surprising total of 1,057. A total of fifteen schools entered this closely contested match, the largest in years, requiring a division of teams into two groups. The shooting was declared the best ever exhibited in a P. S. A. L. Championship meet. All of the seven qualifying teams hit over 975, with five soaring above the 1,000 mark.

In the individual competition Edward Walsh, of Tech, city title-holder, and Harold Lindsay, of Erasmus, finished in a tie for the first place, each with 194 points, equaling Walsh's record made in the same meet last year. Walsh's performances in the prone and sitting positions, however, climaxed anything done by a schoolboy marksman in years. This Tech ace made a perfect score of 120 for a combined total. George Thomas, another Erasmus Hall representative, turned in 192 points for third place.

ENTRIES NOW BEING ACCEPTED FOR THIRD PERIOD BIWEEKLY MATCHES

THE popular appeal the biweekly team matches hold for affiliated Junior clubs is evidenced by the increase in entries for succeeding series. Much benefit is derived from such a complete program, as the teams are afforded competition over nine months of the year. It is a known fact that individual and team scores increase much more rapidly through competition. The needed encouragement or incentive for higher scores is also provided in that rather than conduct one long contest it is broken up into three short series of three months each, in which the three high teams in each of three divisions are awarded trophies.

In the third series, which gets under way with the match arranged for the week ending April 6, there are but five matches. Latecomers or inexperienced clubs who are mak-

ing entry for the first time are afforded the opportunity to compete in this series for honors.

Entries should be mailed early, so that teams may be provided with the official targets and instructions for the complete series. The entry fee is but \$1 a team or 20 cents per match. With ten members representing the club in each match the cost is brought down to exactly 2 cents per member. Each match is fired on schedule and returns made for an announcement and publication of an official bulletin for each event giving the standing of the teams. Clubs may enter several teams, but no one member may fire on more than one team.

You can better judge the possibilities of the biweekly plan of matches by submitting your entry and completing the series.

EXPERT RIFLEMEN

IT PAYS to be conscientious in anything we undertake. By faithful application and that stick-to-it attitude we are sure to always win out.

Eleven of our Junior members qualified as Expert Rifleman during the past month. These members started in the same as many of the tyros who are now becoming familiar with the program, qualifying first as Pro-Marksman, then as Marksman, Sharpshooter, and by completing the course of bars in four positions for attachment to the Sharpshooter Medal decoration as Experts. They found each of the succeeding grades just a little harder, and in all probability at times became a little discouraged when qualifying scores weren't being made as rapidly as they had anticipated. However, they kept right on trying and finally succeeded in reaching their goal as Experts.

Eugene Ehlick, Endicott, N. Y.
Herman Knickerbocker, Endicott, N. Y.
Vincent Miller, Denver, Colo.
Anderson Pace, Jr., Evanston, Ill.
Alburn Smith, Joliet, Ill.
Thomas Hungerford, Jr., Bridgeport, Conn.
William Richardson, Porterville, Calif.
Hampton Weed, Porterville, Calif.
George Heckel, Cheyenne, Wyo.
Church Yearley, Baltimore, Md.
Alvin Hart, Fresno, Calif.

MOSTLY PERSONAL

A record to be proud of is held by members of the Grover Cleveland High School Rifle Club, of St. Louis, Mo. Lieut. R. C. Wilson has reported another victory through a shoulder-to-shoulder match with the Washington University, also of St. Louis. This institution, although having a large number of youngsters participating in the program of the Junior Rifle Corps, holds a Senior charter, as does the Hill Gun Club, of Pottstown, Pa., also recently defeated by the Grover Cleveland team, with a score of 870 to 801. But one match has been lost during the season, that being with the 6th U. S. Infantry, and this team was defeated in the return challenge. Those representing the Grover Cleveland and Washington University teams with their respective scores are as follows:

Cleveland High		Washington University	
Holtgrieve	183	F. Miller	180
Tarantola	177	Gentry	178
Blumer	174	Webb	173
Mott	172	H. Miller	168
Forster	169	Goddard	166
Total	875	Total	865

Many of our older members will recall the fine accomplishments made by Dean M. Earl, of Nickerson, Kans., as an individual member of the Corps several years ago. Dean advanced to the highest degree in the individual medal course, qualifying for the Distinguished Rifleman Bar during 1926. Although no longer eligible for Junior membership, he has continued to promote the good cause through bringing in new members, and for three sessions instructed rifle-shooting among summer campers.

Dean is now 21 years of age and has written us of his wish to become an instructor of the N. R. A. J. R. C. Having moved his residence to Manhattan we look forward to chartering an enthusiastic rifle club in the very near future.

For the past two months the students of the Malden High School Rifle Club, under the direction of C. E. Taylor, have received a thorough course of instruction and are in readiness for what promises to be a very successful season of scholastic shoulder-to-shoulder competition. Each of the 42 riflemen composing the club have qualified as Sharpshooter in the J. R. C. medal qualifications and are now working on their Expert grade. Two members have attained the Expert grade, receiving gold medals. One Expert has completed the Distinguished Rifleman course. In addition the club has had three teams of ten members competing in the first series of biweekly interclub matches.

Range quarters have been enlarged and now there is a club room area separated from the range proper. Here the students may enjoy a social time or make use of it for study while waiting their turn at the firing point.

Several possible scores have been shot on the range lately, the most consistent performer being James H. Scanlan. A tentative scholarship schedule is now in the making, and the representative high-school team will have two matches, one at the local range and one away from home.

Recently the Malden High Club staged a Club Championship Match and a Novelty Turkey Shoot. The first match was run on a re-entry basis and any member could shoot five times and have his highest score stand for record. Ten dollars in merchandise was awarded as prizes and divided into four, three-, two- and one-dollar values. First prize was won by Richard George, with a score of 99. In the Novelty Turkey Shoot a lifelike image of a turkey was suspended in front of the target butts. Concentric scoring rings were marked off on the body of the turkey and each given a number. The contest provided a great deal of amusement, and cash prizes of one dollar each were awarded.

HIS DAY

By MAJ. W. D. FRAZER

This article originally appeared in abbreviated form in "Field and Stream." It is republished in the "News" in its entirety through the courtesy of that magazine. The lesson brought to us is that in rifle shooting, as with all other sports, clean morals and clean living pays.

This story is a true one.

THE sun was rapidly settling toward a hazy September horizon. The breeze that all afternoon had lazily wafted the National Colors on a near-by flagstaff, was steadily dying with the approach of twilight. The continuous cracking and snapping of small arms on a famous rifle range was becoming intermittent. The hum and commotion of the adjoining military encampment was diminishing as the end of a perfect shooting day drew near.

As the last relays took their places on the firing lines a tall wiry figure garbed in a drab forestry cloth suit and a weather-beaten fedora hat approached the thousand-yard range and was directed by a range officer to a place on the line. A face bronzed by Western sun and winds, keen steel blue eyes that twinkled with a kindly smile, alert, purposeful movements, all denoted an out-of-doors-man of the finest type. Closely cropped gray hair and mustache and a few betraying wrinkles about the eyes indicated the proximity of three-score years, though nothing in the six feet of bone and sinew signified old age.

The match that he was entering had begun early in the day with ideal weather conditions and had brought out, as it always does, the finest rifles, telescope sights, specially loaded ammunition with latest stream-line boat-tail bullets—in fact, all the accessories that make for refinements in accuracy. To add to the keenness of the competition there were present many distinguished riflemen who consider the winning of the Wimbledon Cup the greatest achievement in the rifle game, for the simple reason that it is open to any rifle, any sights, any ammunition, and, it might be added, any rifleman from any State who wishes to enter this long-range classic.

The hero of this tale had drawn his rifle the day before from the camp ordnance officer. It had not been properly sighted-in nor was the zero determined. It possessed no special sights, no well-fitted stock, and even the sling was not broken in, as it should be—in other words, it was "as issued" and incidentally quite in keeping with the remainder of the shooting accessories of its possessor.

As the Marine scorer handed 22 rounds of ammunition to the shooter, he noted with surprise, not unmixed with amusement, the unusual and limited accessories grouped in front of the prone figure. No fancy spotting scope with adjustable rest was available with which to read the mirage, and dope the wind, or to locate quickly and accurately the spotter in the bullet holes. Instead an impro-

vised monocular made by cutting in two with a hacksaw a pair of field glasses served the purpose of a telescope. A score book and a micrometer for setting the sight were the only accessories that bespoke the modern rifleman.

After glancing at the drifting smoke from the tall chimney of the camp mess hall and feeling the breeze that played on his left cheek he drew an old pair of glasses from a worn case, adjusted them carefully on his nose and proceeded to set his windage and elevate his sight slide with the micrometer. The operation was done painstakingly, and then to the astonishment of a few spectators he carefully removed his glasses.

Adjusting his sling, settling his elbows in prepared holes he "squeezed in" a couple of dry shots to see how he was holding and seeing. Without more ado he slipped a cartridge in the chamber, thrust the bolt home, snuggled into the sling and elbow holes again and aimed carefully at the distant bull's-eye. The rifle cracked and after a pause the target dropped below the butts and soon the marker at its left was spun around and stopped with a black disk in view. His first shot was on the target and though it was a high two at eleven o'clock, it was there as a good start and a good omen.

The second sighter was fired after a further study of the micrometer and sight was made with the aid of the old specks. This time a five was spotted in the bull and the critical moment for the first record shot was at hand. There was no hesitation now, and every movement by the prone marksman on that sun-burned firing point was made with confidence and without haste. There was a pause as the rifle was leveled and held, and as the recoil came the bullet sped across the flat plain over the butts and into the green waters of Lake Erie.

The target dipped from sight, the marker revolved and stopped with its white side glistening in the sunlight sending a thrill to the distant shooter, which was reflected in his face by a twinkle of the eye and a quick smile of satisfaction. The scorer after verifying the hit with his field glasses chalked a figure on his board and droned monotonously, "First shot for record a five."

Again and again the same careful procedure was observed and each time the Marine recorded a 5 as the white marker indicated a hit in the black. At the eighteenth shot there was a slight pause and a thoughtful, far-away expression crossed the bronzed face as though the marksman was looking into the distant past and realizing that this was the first time he had ever made as many consecutive bull's-eyes at that range.

This introspection was nearly disastrous, for the next spotter was just hanging on the bull's-eye. With one more shot to go an expression of grim determination was registered as rifle butt was pressed against shoulder and cheek glued to comb. As aim and squeeze were co-ordinated the piece fired. Rising on his knees the firer with suspended movements watched the marking of the last shot.

After what seemed an age to the anxious

watchers who had gathered in rear of the scoreboard, as they always do when unusual scores are made, the target popped into view and the marker with maddening deliberateness slowly showed, first black, then red, then black and white and finally stopped as it had for nineteen previous shots, with the white face to the front. A small burst of applause from the onlookers brought a quick smile of pleasure, not unmixed with embarrassment to the benign face of the marksman. Contentment and satisfaction were reflected there, for he had made a possible at a thousand yards with iron sights, for which countless riflemen strive and never obtain. Picking up his simple equipment he moved from the firing line.

An excited range officer suddenly realizing what was happening, hurried after the retreating figure and informed him that he must continue firing as long as his shots were bull's-eyes. Two more clips of ammunition were placed on the firing point and the gray-haired out-of-doors-man resumed his position, checked his sights, opened his score-book, and began a battle such as that famous range had never witnessed and may never see again. It was a fight against odds, with old age armed with a Service rifle and tinned ammunition bucking youth equipped with pressure barrels and telescopic sights.

The gallery grew with the score and gazed with mounting wonder at the unheard-of columns of 5's the Marine private chalked on his blackboard. Thirty, 40, 50 shots without missing the black. What manner of superman was this with the stamina and endurance of a thoroughbred and the eyesight of an eagle?

Among that group of spellbound spectators were several friends of long standing who as they watched the striking figure on the ground saw in retrospect the life that had made possible this phenomenal effort. In his younger days the gray-haired marvel had been a pioneer, first among the rugged

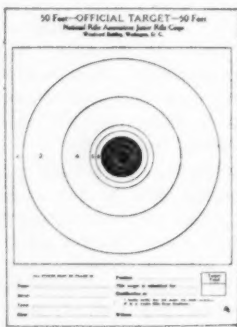
Montana Rockies and later in the midst of the snow-capped Cascades and the majestic Olympics of the Pacific coast.

He had been a lumberman by choice and his environment and occupation had much to do with his love for a rifle and the thrills that go with big-game hunting. He had cruised the pathless forests of Douglas fir, prospecting in Nature's boundless preserves and surveying for ways and means of cutting and marketing inaccessible timber. Often he fought the devastating fires that swept from valley to ridge destroying fortunes overnight and leaving ugly black scars and blotches on an evergreen landscape.

His spare time found him scaling the peaks above the timber line in search of the mountain goat or traversing the wooded ridges after the leaping mule deer. When snows were deep he trailed, with the aid of a few good dogs, the slinking game-destroying cougar. Frequently from the jagged ridges of the Cascades his wonderful vision showed him the valley of the Columbia in all its undeveloped richness, while from the higher elevations of the Olympics he could gaze over the mighty expanse of the Pacific or the dense forests of the Puget Sound country, where bear and black-tail deer still abounded and where the noble elk was fighting for an existence against the inroads of human occupation and settlements.

It may have been the constant gazing at the magnificent views of towering Rainier or of snow-capped Baker that developed his eyesight to such an extent that for far-sightedness few men were his equal, and the power of his light blue eyes was greater than that of the lenses of many field binoculars. It was uncanny the ease with which he could distinguish as bear or goat the black speck moving across the rock slides, or the motionless alert white sentinel poised on a jutting shelf of granite.

(To be continued)




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BARGAIN SALES

THE Director of Civilian Marksmanship is constantly watching for bargains in the way of serviceable ordnance, engineer or signal equipment which may be of use to members of the National Rifle Association and can be offered at attractive prices. In the past a number of rare and exceptional bargains have been offered in the way of telescopic musket sights, field glasses, rifles, revolvers and ammunition. These articles have been sold at such reduced prices that in most cases the demand far exceeded the supply.

The big problem which confronts this office during these bargain sales, and where the supply is limited, is the matter of distribution. An effort is being made whereby the articles will be apportioned to zones and orders filled in each zone in order of their receipt. It is believed that by this method purchasers living on the west coast will be afforded the same opportunities as those living nearer the publication office of THE AMERICAN RIFLEMAN.

In bargains of this character when prices have been reduced to the minimum articles are sometimes sent out which do not in every way fulfill the hopes of the purchaser. It should be borne in mind, however, that they are offered for but a small fraction of their original value, and generally the prices at which they are offered preclude any very careful inspection of them at the point of shipment, as the smallest amount of expert inspection or even of extra handling would add very considerably to the price at which they could be sold. It can be expected that they will be as represented so far as this office can assure it, but in every case these articles are sold "as is" in all that this term implies. So, while generally you will get a real bargain, occasionally you will be disappointed, and at times you may even get a total loss. In the latter event this office wishes it understood that it stands ready to assist in any reasonable adjustment with the Department concerned.

So, when you try to participate in any of our bargain sales, bring your sporting blood along and be willing to take a reasonable chance. Remember there is another fellow who may want a bargain, too; exercise patience and help us to help you when necessary.

Remember the sign posted on the broken-

down piano in the Western dance hall of the early days by the hopelessly poor piano-player in charge of the instrument: "Please do not shoot at the musician; he is doing the best he can."

TECHNICAL QUESTIONS SHOULD BE REFERRED TO THE DOPE BAG

MANY inquiries concerning special rifles, loads, ammunition, sights, velocities, pressures, etc., and which are purely technical questions, are being sent to the office of the Director of Civilian Marksmanship. In order to supply the required information it often becomes necessary to forward these communications to the Ordnance Department, or The Dope Bag of THE AMERICAN RIFLEMAN for advice. This procedure necessarily involves a great deal of paper work and delay in supplying the required information. In order to expedite matters of this character it is requested that all communications requiring a technical analysis be sent to The Dope Bag department of THE AMERICAN RIFLEMAN. This procedure will not only save much delay in securing the desired information, but, besides, many of these inquiries are of a nature that the replies would be of general interest to readers of the RIFLEMAN and members of the National Rifle Association. The RIFLEMAN has a staff of experts on arms, ammunition and loads and can reply to all such questions in an authoritative manner. All such matters as sales, organization of clubs, issuing of supplies, reports and returns should be sent direct to this office as before.

ISSUE OF CALIBER-.22, MODEL 1922, M1 RIFLES

THE deliveries of the U. S. rifle, caliber-.22, Model 1922, M1, have now reached the stage where it is believed that its issue to rifle clubs can begin in March or April of this year. Before any of these rifles are issued the clubs will be required to settle all responsibility for the caliber-.22 Winchester single-shot muskets now in their possession. As an encouragement to more rifle practice the clubs will be given an opportunity to purchase the caliber-.22 Winchester single-shot muskets at present in their possession at a very nominal price. If a club so purchases the muskets in its possession, its property-record card will be credited at once accord-

ingly. In the event that a club does not wish to purchase these muskets, shipping instructions will be issued for their return to an arsenal. Full information and instructions concerning the sale or return of the caliber-.22 Winchester single-shot muskets, and the issuing of the U. S. rifle, caliber-.22, Model 1922, M1, will be sent to all clubs at a very early date.

SUPPLY OF USED FIELD GLASSES EXHAUSTED

INFORMATION has been received in this office to the effect that the supply of used field glasses, Type EE, Naval Gun Factory, has become exhausted, and that quite a number of orders approved by the Director of Civilian Marksmanship have been returned. There is, however, a plentiful supply of the unused glasses on hand, and orders for these can be filled immediately.

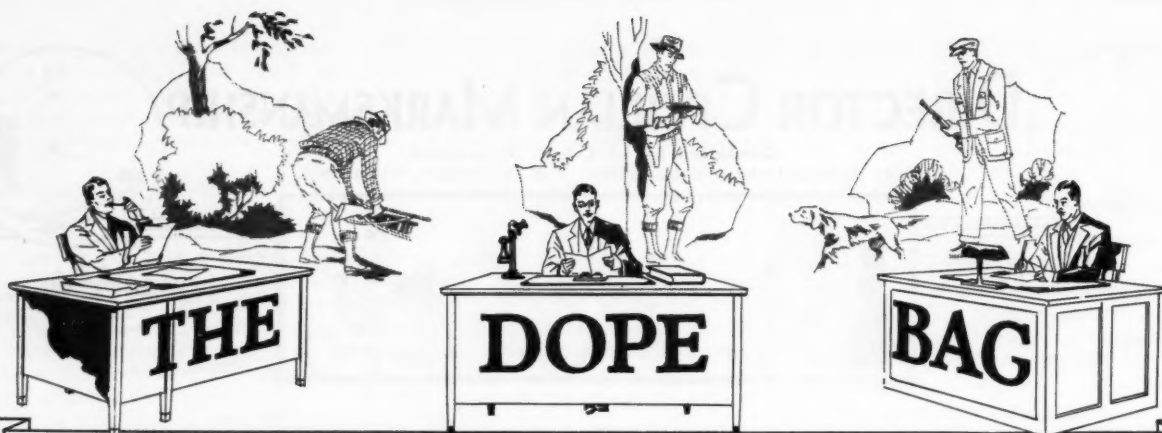
ASSEMBLING BARRELS AND RECEIVERS

SO MANY inquiries are made to this office concerning the fitting of barrels and receivers that it is deemed advisable to offer the following information to members of the National Rifle Association contemplating the purchase of new barrels, receivers or bolts: Whenever the sale of a barrel, or a receiver, for the U. S. rifle, caliber-.30, Model 1903, or the U. S. rifle, caliber-.22, Model 1922, M1, is approved, it is necessary that provision be made by the purchaser to have those parts assembled. It is recommended by this office that the bolt mechanism be always assembled with the barrel and receiver.

This work may be done by experts at Springfield Armory, or it may be done by a commercial gunsmith, whom you may name and who is competent to do this.

Should you desire to have the work done at the Armory, shipment of the receiver and bolt, or the barrel and bolt, should be made to The Commanding Officer, Springfield Armory, Springfield, Mass., all transportation charges prepaid. The remittance to cover the cost of the new part or parts, and the cost of assembling should be sent to the Director of Civilian Marksmanship. The cost of assembling is as follows:

Fitting barrel, receiver and bolt	\$1.25
Fitting barrel and receiver	1.00
Fitting either the barrel, or the receiver to the complete rifle	1.50



RIFLES AND BIG-GAME HUNTING: LT.-COL. TOWNSEND WHELEN

SHOTGUNS AND FIELD SHOOTING: CAPT. CHARLES ASKINS

PISTOLS AND REVOLVERS: MAJ. J. S. HATCHER

EVERY CARE IS USED IN COLLECTING DATA FOR QUESTIONS SUBMITTED, BUT NO RESPONSIBILITY IS ASSUMED FOR ANY ACCIDENT WHICH MAY OCCUR.

A Free Service to Target, Big Game and Field Shots — All questions answered directly by mail

Growth of The Dope Bag—Help Needed From Users

DURING the year 1928 over 5,000 letters were answered through the Dope Bag Department. Of these Colonel Whelen's section on rifles answered 3,647 letters. Less than 100 of these letters and the replies were published in *THE AMERICAN RIFLEMAN*. The clerical work of handling this mass of highly technical correspondence has been enormous, and as it is presumed that this service to N. R. A. members will increase rather than diminish, opportunity is taken here to ask that all using this service help out by reading the following, and that they comply with the same as nearly as practicable:

It is astonishing how many letters contain insufficient or illegible names and addresses. Please print your name and address clearly on your letter, and please *do not* send self-addressed envelopes, which often get separated from the letters to which they belong, and which are never large enough to contain the replies. Stamps for postage will always be appreciated.

Send your letters addressed to the *Dope Bag Department, THE AMERICAN RIFLEMAN, Barr Building, Washington, D. C.* The entire address is very necessary. Write separate letters dealing with (a) rifles, (b) pistols, and (c) shotguns, as the editors dealing with these matters live in different cities and it is not practicable to refer letters from one to the other. *Do not* write to the D. C. M., or the N. R. A. Service Company, or to the Secretary N. R. A. on these matters. It simply means that your letter must be read by someone who does not understand it, and finally after much delay and clerical work it finally gets around to the Dope Bag Department. *Do not* write to the D. C. M. until you are ready to actually purchase Government material; and *do not* write to the N. R. A. Service Company until you are ready to purchase goods listed in their price list. Letters to them asking for advice belong to the Dope Bag Department, by whom

they are always answered. Do not include with your Dope Bag letters inquiries about your subscription or change of address, which should be sent to the Editor of the *RIFLEMAN*, or about your N. R. A. membership or other matters which should be sent to the Secretary N. R. A. Compliance with these requests will help a lot.

Before asking questions about reloading it is recommended that correspondents always obtain a copy of the "Ideal Handbook," which can be had from the Lyman Gun Sight Corporation, Middlefield, Conn., for 50 cents. It contains full information on reloading for every caliber, and also all the basic information on reloading which everyone should have before he attempts to reload a single round. In the great majority of cases every question is answered in this handbook. Also almost all the intricate matters connected with gunsmithing and the remodeling of rifles are contained in Baker's book, "Modern Gunsmithing," which everyone attempting any remodeling or gunsmithing work should have. The Dope Bag has grown to such an extent that there is no longer time to copy matter from standard books into letters.

The Dope Bag Department endeavors to tell the naked truth every time. It is entirely free from any trade influence whatever. When we tell you that a certain rifle is the best for your use it is because our experience has strongly indicated that this rifle is absolutely the best, not because we have any desire to push the sale of that particular weapon, but because we want you to use the best rifle for you, so that you can develop better marksmanship in your own particular line. Don't forget that the Dope Bag Department is a part of the N. R. A., and the first duty of the N. R. A. is to make nail-driving marksmen, and as many of them as possible. Sometimes we tell a correspondent that the main trouble is that

he is entirely untrained as a rifleman, and that all his ideas are of no help to him until he becomes trained. Then we proceed to help him train himself. Please do not misconstrue these efforts of ours. Our one idea is to help you toward better and more suitable weapons at a minimum cost to you, and to help you in your own efforts to make yourself a trained rifleman. To that end we spare neither time, pains, nor money. We want to be of the utmost help to you, and in order that we can be, won't you on your part try to help us by making the clerical work easier, so we can serve more riflemen and serve them better?

We thank you.

WISHES NON-CORROSIVE PRIMERS

I WANT to know how or where I can get some of those new non-corrosive primers made by the Government, written about in an article in the *RIFLEMAN* a few months ago, if you will kindly give me such information, as I have learned that something—either primer, powder or something else—is most deadly to rifle bore of late years right in front of the chamber, as nearly all barrels show in a very short time, and would like to overcome and avoid it if possible and have a new barrel put in my rifle.—T. M. B.

Answer (by Colonel Whelen). The ammunition of Government manufacture loaded with non-corrosive primers is now undergoing a service test for about three years. If, at the end of that period it stands up well in service, it will probably be adopted for future manufacture. Therefore, no Government non-corrosive primers are as yet available, and it is not known positively when they will be.

All of the cartridge companies are gradually adapting all their modern cartridges to the non-corrosive primer. So far the entire product of these companies in non-corrosive primers has had to go into loaded factory ammunition. Just as soon as one or more of these companies are in position to furnish the primers separately for those who load their own ammunition, that fact will be announced in the columns of *THE AMERICAN RIFLEMAN*. It is probable that these new primers will fit all new and old cartridge cases interchangeably with present primers.

THAT MIL SCALE IN THOSE BINOCULARS

I have a pair of field glasses which has the Infantry mil scale mounted in the left tube. I do not understand the use of this scale, and up to present have been unable to locate any reference which explains the scale.

If I am not asking too much, will you please publish in some future number of the RIFEMAN an explanation and instructions in the use of this scale. If publishing in the magazine is not practicable, will some member of your editorial staff kindly explain its use to me or give me reference as to where I can find instruction in its use?—W. V. E.

Answer (by Colonel Whelen). The left telescope of the Type EE field glasses is fitted with a glass reticule upon which are etched a vertical mil scale, graduated in Infantry mils; a horizontal mil scale, graduated in Artillery mils; and a stadia scale corresponding to the inverted sight leaf graduations on the Service rifle. This reticule is used principally by Infantry and Artillery organizations in fire control.

A mil is an angular measurement which subtends an arc which is 1/1,000 of the range. Thus at 1,000 yards a mil subtends 1 yard. A mil is therefore the equivalent of 3.6 minutes of angle, which last measurement is well known to all trained riflemen.

The inverted sight leaf graduation is practically obsolete in its use, and is no longer in practical use. In target designation our Infantry now use a unit which is called a "sight leaf." This sight leaf is an angular measurement corresponding to 50 mils. It is obtained by holding the rifle with sight leaf elevated at such a predetermined distance from the eye that it subtends 50 mils on the landscape. It is used in this way: Let us say that the company commander sees a target which he wishes to bring fire upon which is a certain distance to the right or left of a given object in the landscape, but the target is hard to pick up and to describe to his men. Let us say that the object in the landscape which he wishes to use as a reference point is a certain white house. In designating the target he will therefore say: "Reference point, that white house in front. Target 2 sight leaves to the right. Range, 700. Fire at will." He measures the horizontal distance from the house to the target with his horizontal mil scale in his glasses, and finding it 100 mils to the right, he gives it as two sight leaves to his men. Each man, by holding up his rifle at the right distance from his eye, sight leaf raised, can at once apply the sight leaf twice to the landscape to the right of the house, and he will pick up the target which his company commander is trying to point out to him. There are a number of other uses for this scale, but this will serve roughly to indicate what they are.

PRACTICE LOADS FOR INTERNATIONAL RIFLE

I HAVE been lucky enough to be placed as No. 27 on the .30 Martini free rifles the Ordnance Department are making up for sale through the N. R. A. Service Co., and would like to have your advice on practice loads for this rifle. I have been reloading for some time and understand it fairly well, but I do not know so much about reduced loads, etc.

I expect to practice (or do at present with my heavy-barrel Springfield) at the 100-yard International target, and I like

your 150-grain service bullet with 18 grains du Pont No. 80 load. I would much rather use the service bullet than a lead bullet, because it is about as cheap, considering everything, but how about the wear on the barrel? I will be using a lot of ammunition.

I have the following powders: du Pont 80, 18 and 17½; Hercules HiVel.

I have been using a duplicate of the '27 International load of 172-grain boat-tail 2,250 f. s. for turkey shoots, etc., with HiVel powder. It has given excellent results; but I have been told this double-base powder is injurious to a barrel, and I don't want to ruin any of my barrels in the target rifles, as they cost too much to replace. Will the HiVel powder really damage a barrel at this low speed, 2,250 f. s.? If so, can I develop a similar accurate load of about the same speed with du Pont No. 18?

I notice du Pont gives a charge of 38 grains No. 18 with 172 boat-tail at 2,150 f. s., which looks good to me; but will the powder burn clean and accurate enough at this speed?—P. W.

Answer (by Colonel Whelen). I know of no reduced load for the .30-06 rifles which is quite so accurate or satisfactory as that of the 150-grain old service full-jacketed bullet and 18 grains of du Pont No. 80 powder. In a good heavy-barreled International rifle it ought to shoot steadily into about 1½ inches at 100 yards, perhaps much closer. The wear is practically nil, as the powder charge is not sufficient to give any erosion, and the bullet causes very little wear. It is thought that in .30 caliber, eliminating the matter of powder erosion, the wear caused by jacketed bullets in a smokeless-steel barrel will not become apparent until about 12,000 rounds have been fired, and even then the wear is so small that it will probably have no effect on accuracy.

HiVel powder in the International load of 36 grains causes little erosion, and it is an exceedingly accurate powder—much more so than any other I think in these light loads. The other powders usually require more pressure to burn cleanly and give fine accuracy, and when you get more pressure you begin to get more erosion. If you use the other nitrocellulose powders in their minimum charges then you don't get the accuracy.

Boat-tail bullets are rather hard on a barrel. They have to be made awfully hard both in jacket and core to shoot well, and there is considerable friction in the barrel. And besides, the boat-tail, with the sides of bore, acts like a regular funnel to direct the powder gases in between the bullet and the bore. I have not heard of its being tried, but I would suggest to you a load consisting of the Remington 180-grain flat-base Palma .30-caliber bullet and 37 grains of Hercules HiVel powder. I should think it would make a most accurate and satisfactory free-rifle load, and one which would cause little or no wear on the barrel. There might be a little metal-fouling, I am not sure, but that could be easily taken care of by cleaning with ammonia. I wish some cartridge company would put out a really good flat-base 180-grain bullet in .30 caliber with both full jacket and open point, and with a gilding-metal or Lubaloy jacket.

HUNTING KNIVES AND DEER AND MOOSE CARTRIDGES

I WANT one all-around hunting knife. Will you please tell me what length of blade I should have? I like Wade &

Butcher's Teddy, but am afraid it is too short for sticking. Something that can be used for deer or possibly moose skinning and sticking, alike.

What is the range of a Winchester .38-55 in the woods? How effective on moose or bear? Please compare the Winchester .38-55 to the .30-06 on deer.—L. L.

Answer (by Colonel Whelen). You mention a knife which is made of rustless steel. Most decidedly you do not want such a knife because it can not readily be sharpened on an oil or carborundum stone. If the hunting knife be not sharp it is absolutely useless. Nothing dulls a knife so much as skinning. During the skinning of a deer usually a knife must be sharpened two or three times; skinning a moose, four or five times; and to skin a Rocky Mountain goat will require at least a dozen sharpenings. You want a knife with easily sharpened steel; that is, rather soft steel; and your oilstone should be carried in the pocket while hunting, not left back in camp.

I do not know just what you mean when you state that a certain knife is too short for "sticking." I have never used a knife for sticking, nor have I ever heard of any hunter doing so except in fiction. Most knives seen are entirely too long for any practical use. What a hunting knife is used for is mostly as a butcher knife around camp for cutting up and carving meat, sometimes for rough whittling, although a jackknife is better for this, and of course for skinning when you kill a big-game animal.

For all of these uses, and considering the matter of the quality of steel, there is no better knife made than the Remington sheath knife No. R H 28, with 4½-inch blade, costing \$2. You can probably get it from Von Lengerke & Antoine. The sheath that comes with the knife is absolutely useless, and you are very liable to lose the knife out of this sheath. On the hunt from which I have just returned two of the party on their first big-game hunt had knives in sheaths of this kind, and both lost their knives on the trip. The sheath should be made somewhat like the sketch on the margin of this letter—made of heavy oil-tanned leather, so that it takes the knife snugly up to a point about ¼ inch from the end of the handle. See that the loop is large enough for your belt, and very strongly sewed on. I make my own sheaths, and sew both the loop and the edge with rawhide lacing. Any good leather worker can make a fine sheath for you. Sometimes it is advisable to place a few stitches of fine copper wire inside the rawhide stitches near the point of the sheath to prevent the possibility of the knife being driven through the sheath by a fall and wounding one.

The effective range, considering accuracy and trajectory, at which one can surely place his bullet within a vital area on large game in the woods is about 150 yards. This cartridge is hardly powerful enough for moose. Too often it would require four or five bullets to kill a moose, and such a cartridge is decidedly not sportsmanlike for moose. It is a splendid deer cartridge, however—in fact, one of the very best, because it kills neatly without destroying much good venison, and there are very few times in the life of a hunter in the North Woods when he has to fire at deer at over 150 yards. On deer the .30-06 cartridge will very frequently spoil a great deal of meat. In fact, if you shoot a deer through the shoulders with a rifle taking the .30-06 cartridge the probabilities are that all the meat on the off fore quarter will be ruined. The .30-06 is a splendid moose cartridge.

Deer Rifles and Deer-Shooting

[We believe that the following correspondence between Mr. J. R. Mattern and Colonel Whelen on this subject will be found extremely interesting by our readers.—EDITOR.]

LETTER FROM MR. MATTERN

DEAR COLONEL WHELEN:

AS A WAY of expressing Merry Christmas to you, I will jot down a few observations following the Pennsylvania doe season just ended on the 15th. This forenoon I took a walk through a belt of young pine, seeking a Christmas tree and just looking, and I found three dead does which had crawled in that shelter and died.

I had a hand ax along today, and cut open all three does I found. In two of them I located .38-40 bullets, and in the third found a .30-30 bullet. At the risk of encountering your objection, I want to explain here my position in this matter of the desirability of the different classes of cartridges in the Eastern hunting fields for deer and black bear. I maintain that few who are getting into print have any adequate idea of the real conditions prevailing at the instant of the shooting, in the Allegheny Mountains from highland Quebec and Ontario down to northern Georgia, where most of the game is killed.

The statement is often made that the .38-40 and the .30-30 are entirely adequate in power for deer and black bear under the shooting conditions of the East. This statement is true only in the sense that placed bullets are adequate; and if the same supposition of intelligent and skillful shooting is carried just a little bit further, a .32-20 or .25-20, or even a .22, is also adequate—that is, a .25-20 bullet will kill a deer struck in the head or backbone or heart.

The facts are against the prevailing truth of the .38-40 adequacy; and the same statement applies to .30-30 adequacy, because the shooting is not usually done intelligently, or coolly, or skillfully. In fact, modern deer-shooting is done in an increasingly sloppy and ignorant manner. The placed shot is one in a thousand. What we are faced with is to effect prompt, humane, nontrailing kills as the work of clumsy hunters, who make gut-shots, hip-shots, neck-shots; and only by accident make the good shoulder- and back-shots that drop animals on the spot from wreckage of framework or vitals.

The worst element in Allegheny Mountain hunting, or I should say the worst element among the hunters, is the gang hunter—the crew which hunts together like a pack of wolves—and which gets about 99 per cent of the publicity. But you can take my word for it that fully two-thirds of the deer are killed by the hunters who do not talk, and do not hunt in packs. It is the gang hunter who mows the brush with his famous short-range shooting, who gets the close-up "spraying" at deer flashing by in brush. Even his watchers seldom get anything else than close shooting because of the nature of the men and the nature of deer. The latter causes the crossing to be located in any brushy neck connecting two hills or two pieces of wood area (a deer won't cross in the open if he can skip through cover). And as for the nature of the man, you find him using \$1.50 Springfield .45-70's, Krag's, Russians, old worn-out Winchesters and Marlins, and those inescapable Model 94 Winchester carbines. It is the exception to find a real gun in such a crowd.

I wish I could detail a few personal experiences and observations of this fall. The "doe-hunters" were of course the cheapest and most ignorant element, it

must be admitted; yet they were instructive as representing an element which is really in the majority among shooters. One bunch went into a sporting-goods store and asked for cartridges, no size specified, not knowing that there were different sizes. They admitted knowing that shot-guns and rifles differed. This sounds impossible, yet it is true. I encountered any number of Krag-users who had plenty of shooting, and failed to score, and who never had discovered they were using battle-sight adjustment, putting all bullets over the backs of their does. Not less than 100 deer and half a dozen bear were killed in my home township of Huston. I covered quite a large field in my own hunting, as it was combined with surveying, and covered a longer period than usual this year. There was a general breakdown in law observance, hunters taking the stand that if the Game Commission could change and break the law they could too; and farmers, most of whom were denied licenses to kill deer after having suffered damages, took things somewhat into their own hands. The posted area increased several hundred per cent, taking in large sections of mountain land for the first time.

I know of 100 shots being fired by a bunch of fairly good average hunters, using Savage .300, Savage .303, Springfield .38-40, Krag, etc., at a bunch of four deer across a 500-yard field, and only two were downed, one escaping fatally wounded and the other apparently scot free. When I label this crowd as fairly good, I mean they are better than the average hunter in knowledge of rifles and knowledge of game. They have killed a good many deer to my knowledge in the last twenty years. The deer broke cover within 50 yards of one of them, within 150 yards of two others and for the last 200 or 250 yards all had shooting. I know of an old .38-40 user who got a Krag this year, and, unusually, got it sighted up properly and his stock built up somewhat. He shot at a deer at 75 yards, and when she ran 50 yards and disappeared into the woods did not follow her. He explained to me that he had often in the past seen deer shot in the ribs or flank with .38-40 and even .45's, which would travel for a half day, miles and miles. Three or four days later he discovered his deer within 30 yards of the woods' edge. It had been shot through the last (rear) rib, and in going out the opposite side the .30-40 bullet had torn a 2½-inch hole and pulled out a foot of intestine. "I did not know I had such a deadly rifle," he told me.

On the first day of the season, curiously, not a single deer was bagged on the mountain ridge directly south of my house, for a distance of nearly 2 miles along it. I didn't hunt much that day, for obvious reasons, and counted twenty-nine different instances when deer were very probably shot at. Later I questioned as many of the hunters who had been in there as I happened to meet. Man after man reported shooting and apparently hitting the game. One young fellow with a .32-40 reported hitting two deer which escaped. The last one, he said, he did not even search for. A few days later a small buck was found dead near by. It had been disemboweled by a low paunch shot cutting out the bottom of cavity, but had run or dragged itself some distance. I personally know of seven dead deer lying in this area,

and there are probably many times seven not found. Another young fellow with a .22 HPS said he also shot two deer that got away, and then left that section, came over into the Allegheny foothills, got another shot which stretched the deer out, apparently a neck-shot, but let it get up and get away after he had laid down his rifle and walked toward it.

And here is one that directly concerns you, or so the fellow says, although I myself do not recall seeing the connecting link he mentions. He had been using a .250 Savage until this year. He changed to a .44-40 because, as he said, everybody was telling him that the high-power rifles were too dangerous, and shoot too far; and he read in one of the magazines that you said a .38-40 was safe to use in settled districts or where there were lots of hunters. A friend of mine was standing on the bank of a road with this man—a stranger—100 yards away, and another man, one of his own party, a little distance at his other hand. A deer came toward them, jumped into the road in such a position that they had to shoot lengthwise of the road. Five hundred yards away, in plain sight, a dozen or more cars were parked. The stranger fired a shot. "Don't shoot!" yelled my friend: "Don't you see the danger?" The stranger turned a smiling face to him, and answered: "You can't shoot, with that high-power Remington; but I've got a safe rifle, a .44." And he proceeded to blaze away four shots, every bullet of which went down the road and hit a car, as it happened. We are dealing with mighty ignorant stuff in these proletariat "riflemen." In the ensuing discussion the fellow said he was from Altoona, had seen the RIFLEMAN and other magazines around the National Guard offices there, and that he had read your (Whelen) statement to the effect that while high-power rifles were dangerous, the old-style cartridges were safe. The truth of the matter, of course, is that the old cartridges are more dangerous, much more dangerous, for two or three reasons: First, all bullets, or 90 per cent of them, strike but once on the ground, and that at a good angle. Their danger zone is short in hunting territory. A high-power (a much-abused term) has its moment of danger, and the low-power has its moment. The big lead bullet cuts through brush better than the high-speed bullet, is less easily stopped or deflected, hence goes farther through among twigs and trees, and is more dangerous in the actual ground area. Then there is that psychological factor. The man with the low-power gun knows he has to hit the game harder and more frequently, and pumps the bullets at it promiscuously, uphill and down dale. Few are indeed so ignorant that they imagine they can shoot a .44-40 just anywhere, like a shotgun; but it is surprising how much more liberal the average hunter is with his bullets when he thinks he is armed with something else than one of those deadly high-power guns.

And this brings us to the threadbare statement that all, or nearly all, Eastern shooting is within 50 or 100 yards. I think those are the accepted figures. I saw someone make a statement a month or two ago that used the word "never" in regard to long-range work in the Alleghenies.

This year, during the two weeks' open season, I saw within good shooting conditions a total of about 23 deer, counting them by visualizing the occasions and tallying on a paper as I wrote. Of these just three were within 100 yards; no, four of them. The rest were at 150 to 450 yards. And I think that my own experience is typical of that of anyone else who

hunts in the Alleghenies in a common-sense manner—that is, anyone who does not confine his hunting exclusively to gang tactics, stays in the thick brush, etc. Certainly this experience is entirely typical of that of previous years of my own hunting, so long as I can remember. To make the situation clear and convincing, you must grasp the conditions:

First, the entire Alleghenies are cut up—hills and hollows. There is little level ground; second, in common with all sections east of the Mississippi, there are immense areas of abandoned farm land, of land lumbered bare and then burned so hard and so often that it has become grass and blueberry area instead of oak or pine area; third, even the occupied farms, and the thousands and thousands of miles of roads, trails and stream openings are now game fields. If a man stays in thick brush, naturally he will have nothing but brush shooting. But what is the use of tramping through brush where you can not see more than 25 or 30 yards, and can not help but make noise, and can not possibly see game unless someone else chases it past you by accident? It is much more sensible to scout along the edges, through open woods, watch across hollows toward hillsides, or to observe from hilltops, finding game yourself or getting the pleasure of watching it for a half hour at a time if someone else stirs it from its bed in a distant thicket.

If a hunter is a good shot, he can thus pick his trophy. He may get close-range shooting. In four out of five instances his opportunities will come at 200 yards or beyond. I can describe in detail to you at least a half dozen instances of this season where I sat on a hilltop and watched both hunters and deer, sometimes the hunters being aware of the deer and sometimes not, within 300 yards of one another, but without a shot being fired. That short-range stuff has become another psychological hazard.

You were never more right in your life than when you made the statement recently that you had decided a scope sight was your future hunting dependence. The trend of the times is altogether that way. We have to look for horns. We desire to select our trophy. We want to shoot safely. We want to enjoy our outdoors and our game. The glass has become a necessity. Personally, I like the scope sight for its precision in hold on game, and have killed my last four deer with the shot into the down curve of the spine at the top of the shoulders. It seems to work like magic, although it takes close holding—too close to be attempted in safety with ordinary sights beyond 100 yards. I like a field glass with me, also, around here with a limit of 6 or 8 or 10 miles to a day's tramp.

If I haven't completely worn you out, I will have shown you that I think the exclusively short-range idea is a myth; and that it merely serves to give recognition to an undesirable element among hunters. Further, I think that the larger the rifle carried by the average hunter, within reason, the better for everybody—that is, a .30-06 is much closer the ideal than a .38-40. In fact, owing to the suffering caused game, and the 200 per cent loss of game compared to that bagged in actual field conditions, the .38-40 should be retired, absolutely. And all other cartridges of its level of power. Further, a man is more to be commended for carrying a .45-70, .405 or .375 Magnum than for attempting to hunt modern big game in the Alleghenies with a .32-20. The .30-40 is a success where the .30-30 fails, in making kills through poorly placed hits; but is in no sense as effective on deer in

the average hands as the .30-06-150, 3,000 f. s. Remington load, which, with the .270 Winchester, are today's most advanced and effective deer medicine under these conditions. Even the .30-06-110-3,500 has given first-class results within 300 yards in every one of half a dozen instances I have seen it hit deer. The .30-06-220 is not as dependable on deer, although it is better on bear; and the .30-06-180 is the bear load.

My last hunting was to help find a wounded bear in the northern part of this county. It had been shot at about 200 yards by a .30-caliber, 220-grain bullet through the groin, on Saturday, the 9th. On Monday we succeeded in following it a mile or so, but lost it in laurel thickets. It was jumped a couple of times by other hunters, and finally, on Friday, in the fog and rain, the man who hit it first happened to glimpse it down an aisle in the trees, and finished it. It no longer could jump, but just walked or trotted, as he shot it. These bear take lots of killing, and so do deer, if they are not hit in a vital area.

Very sincerely,

J. R. MATTERN.

REPLY BY COLONEL WHELEN

DEAR MATTERN:

I want to thank you very much indeed for your nice long lecture on deer rifles, of December 21. I find it extremely interesting, and it will be of the greatest assistance to me. If I did not have men such as you to straighten me out once in a while I do not know what I would do. Certainly I could not keep up to date to answer my many correspondents with the best results because so many questions are asked on so many matters that no one man's experience could possibly cover the whole field.

Perhaps I am at fault because I have relied too much upon my own limited experience in advising correspondents as to the best rifle for such and such conditions. I am very glad to get the views of a man who has had the very unusual opportunities for observing the effect of various cartridges on deer that you have.

I have killed, perhaps, 40 deer with .30-30 rifles, and several with the .44-40 rifle; but my experience has perhaps been unique, and you bring the fact to me that I should not rely too much upon it. In my boyhood days, about 1892, I started in to shoot the rifle and to hunt deer, and I was very lucky at the start to get some particularly good literature on rifle-shooting which started me out right: Particularly I remember very well the old Lyman rifle-sight catalogue of those days which stated very explicitly that in shooting with Lyman sights one ought to disregard the rear sight entirely, allowing the eye to naturally center the bead of the front sight in the aperture. "Simply place the bead of the front sight on the target and pull the trigger carefully." I equipped my first rifle with Lyman sights, and I have used those sights exclusively ever since. I found it remarkably easy to place the front sight on the game and then squeeze the trigger in perfect time and with great speed, and this knack has always helped me a lot in game-shooting. Thus many years ago in British Columbia I shot a great many mule deer, almost all of them with my old .30-30 Winchester. I never had any fault to find with that rifle. I seldom missed or wounded a deer. Almost all were killed by well-placed shots in the vitals, and killed quickly and humanely. But you will notice that I had the knack of placing my shots fairly well. Few men have this knack because they have never taken the trouble to study up about rifle

marksmanship, nor have they ever specially trained themselves in rifle marksmanship. Such men will, of course, often place their shots wide of the vital parts on big game; and, of course, a bullet from one of these light rifles striking wide of the vitals, or even on the border of a vital part, may easily fail to bring the game to bag, and allow the wounded animal to escape to die a lingering and painful death. Of course we both know that the .270 W. C. F., the .30-40 Krag, and the .30-06 cartridges give so much wider area of destructive effect that the regions on the body of an animal where they will effect a sure kill are very much larger than similar regions when using a lighter cartridge. The sure-killing target being bigger for these more powerful cartridges, the mediocre shot will much more often make a killing hit.

I am taking your lecture very much to heart, and hereafter I am going to advise that these light cartridges—.38-40, .44-40, .38-55, .30-30, and others of that class—are only to be regarded as satisfactory for deer when the rifle is used by a very excellent shot and skilled hunter, who will be able to place his shots with a fair degree of accuracy, and who will not fire when he sees that there is no chance of correctly placing a shot.

Very sincerely,

TOWNSEND WHELEN.

SECOND LETTER FROM MR. MATTERN

DEAR COLONEL WHELEN:

It may help you to get the complete picture of Allegheny hunting by adding these details. There are half a million licenses issued in this State alone. More than half of these people hunt big game—perhaps 300,000 to 400,000 of them. The kill is, as you say, 20,000 or so. It was 10,000 or 15,000 in addition this year, but only the 20,000 in other late seasons. Thus but one hunter in about each 12, 15, 20 or even 30 gets his deer. Few hunters go through a season without "seeing" game, and shooting at it. Thus we have a dozen or two dozen men who shoot at game without bagging it to every one who brings in a deer. There is a vast amount of outright missing done—missing the whole animal, clean and clear. And a lot of this is not missing with just one flash shot in the brush, but missing with six to ten shots, fired more or less deliberately at game running over a course of 200 yards or so while in sight. These misses are interesting, but not disgusting, like the promiscuous hits that fail to stop the animals. You thus will see that your own experience, where you fired with a conscious control of your bullet, knowing where it would strike, and knowing you had a hold on some selected area of each animal, is decidedly not typical of Allegheny hunting, style of 1929. I do not take the position that there is no good and skillful shooting and hunting done—in fact have set down my estimate of two in each three deer bagged being brought in by the other type of hunter—but the unskilled and wrong-headed rifle-shooter is in the great majority.

The point of mentioning this here is that these hunters and rifle-users are today's vast majority of American riflemen. They are our rifle-shooters. The scattering of the more deeply informed, who subscribe to the *RIFLEMAN*, go to Camp Perry, and who buy high-grade arms, are a mere handful beside this large group.

I always liked the policy of the Government selling Krag and other good rifles for low prices, particularly for the reason that many boys and beginners get them when more expensive rifles would be unattainable for them. And having obtained

the good rifles, with range and power at their command, these beginners usually also get some grasp of trajectory, windage, grouping and other data. If every Springfield, Enfield and Krag could be accompanied by a plainly worded explanation of good holding and trigger squeeze positions, and the usual tables of trajectories, wind drift, time of flight, remaining velocities, and others given the military student, it would help in spreading the real rifleman's angle of view. The boys would grow up with that slant.

Sincerely,

J. R. MATTERN.

CHOOSING A SHOTGUN

I AM THINKING of buying a new gun and wish your opinion as to which is the bet-

ter gun for "hard use and best shooting qualities"—the Browning or the Old Model 97 Winchester pump? Also, what is the advantage of a 32-inch barrel over a 30? Some have told me that the Winchester above mentioned would shoot harder and was in fact longer range than the Browning or any automatic on account of the automatic's losing some force in the power used in operating the gun. Is this true? What do you think of the 16-gauge compared with the 12?—F. M.

Answer (by Captain Askins). I believe the Browning would bag more ducks than the Winchester, Model 97, or any other pump gun; but at the same time I'd rather have the pump. I do not shoot so fast and shoot better.

Automatics do not lose any force in functioning the action, according to all

our cartridge companies, with no exception. They get precisely the same velocities out of the automatics that they do from other guns.

The 30-inch barrel will shoot just as hard as the 32-inch. The main difference is that a man swings more steadily with the longer barrel and maybe holds closer. Weight and length of barrel have a good deal to do with close aiming and steady shooting, but not much to do with pattern, penetration or power.

I think the 16-gauge is a far more attractive gun than the 12, for everything except waterfowl shooting. For ducks the 12 is small enough and the 10 bore is better.

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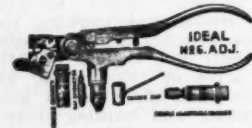
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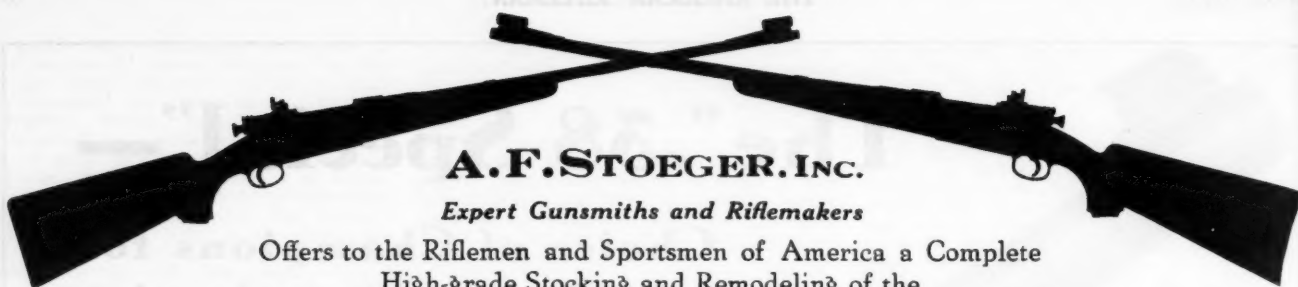
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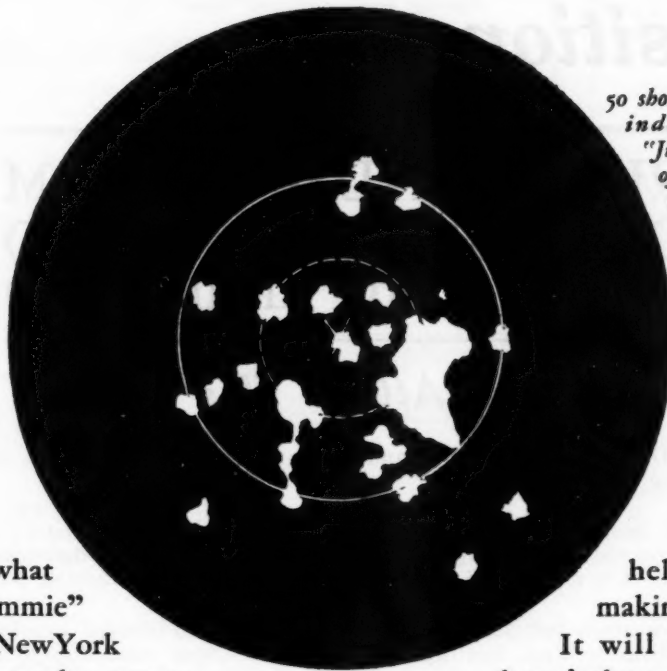
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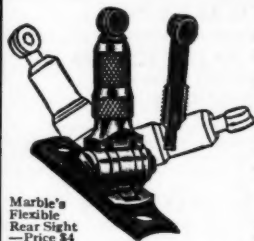
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CALIFORNIA dried fruits and nuts in sanitary paper-lined bags for hunters. Send for information. J. A. Armstrong, Gilroy, Calif. 3-29

PARKER A1 Special, 12-gauge, 30-inch barrels, 8½ pounds, full pistol grip 14-inch x 1½-inch x 1¼-inch, right barrel 70 per cent, left 75 per cent choke, beautifully engraved, real bargain. If interested, write for full particulars. Hilton Crowther, Dalton, Mass. 3-29

NEW .45-90 Winchester, Model 86, with case and two boxes cartridges, \$40; nearly new .33-caliber, '86 Model, with case and box of cartridges, \$40. Chas. DeGoller, Clayton, Wis. 3-29

52 MODEL Winchester, fine; 22-32 S. & W., fine. WANTED—30-06 match grade Springfield. John Holmes, Madrid, N. Mex. 3-29

A BARGAIN for whoever buys first. One .25-20 Winchester Niedner rifle, new barrel, new stock, powder, bullets, loading tools: one 20-gauge A-grade Fox, 28-inch barrel, built to order. Will take \$90 for the two guns if bought at the same time. First cost, \$150. E. W. Leech, Gaffney, S. C. 3-29

.30-06 WINCHESTER 54, with 48 Lyman rear, good as new, stock slightly scratched, \$35. Ralph Ross, Morris, Minn. 3-29

NEW NOSKE SCOPE, pointed post reticule, \$16. Elmer R. Stahl, 416 Mercer St., Turtle Creek, Pa. 3-29

LOADING TOOLS, .25-20, \$5; 250 pocket-knives, white bone handles, sturdy, 2 blades, 50 cents each; 2 Springfield barrels, available through disappointment in Alaska trip, works of art in restocking, perfect, \$55, \$65; picture of them, 10 cents; .30-caliber U. S., Model 95, carbine, bought also for above trip, \$32; some remodeled 8-mm. Mausers, Krag, \$10 each; .44-caliber Colts, cap-and-ball, \$10; .32-caliber Colts, P. P., \$15; .32-caliber Dresse auto., \$5; .38-caliber I. J., \$5; .38-caliber forehead \$5; I. J., new, \$10; .32-caliber; .38-caliber H. & R. blue, excellent, \$8.50; Winchester Model 12, 12-gauge, like new, \$31.50. Finest restocking, designing, bluing. Trades. Exchanges. Rebluing process, used by governments and largest manufacturers, \$1. Cleveland's Gun Shop, 707 Second Ave. S., Minneapolis, Minn. 3-29

MALCOLM 3-power No. 1 scope B. & M. A mounts, excellent. WANTED—.45 auto. Bert Rogers, Grand Cane, La. 3-29

.32 S. & W., 6-inch barrel, fair, \$8; 9-mm. Luger, 3½ inch barrel, made in 1913, crank condition, with holster and shells, \$25. DeWitt Ingalls, 5827 N. Kostner Ave., Chicago, Ill. 3-29

SPRINGFIELD SPORTER, refinished, checked stock, never used, perfect, \$50; sealed case, 30-06 war-time ammunition, \$18; Colt .44 cap-and-ball revolver, fine condition, \$15. I. G. Jackson, Danville, Ky. 3-29

GRIFFIN & HOWE Springfield Sporter highly engraved, Zeiss scope. A. J. Backes, Easby, N. Dak. 3-29

FOR SALE, no trades—R. & M. tools: No. 26 for .30-06, .30-40 and .45 ACP, with 4 expanding plugs, \$5; .30-06 and .30-40 seater, \$1.50; .45 ACP seater, \$1.50; .45 ACP full-length sizer, \$2; .30-06 bullet-puller, \$1.50; .30-06 bullet-sizer, \$2; .30-06 Yankee full-length sizer, \$1.50; all for \$13.50; .30-06 and .30-03 primed unfired cases, \$1.50 per 100; .30-06 Springfield Sporter, B. & M. 3X scope, new; 6-mm. Obendorf Mauser, \$15; No. 24 Remington auto. rifle, new, \$15; .32 adapter for .45 ACP, \$4. E. M. Hoskinson, Lincoln, Nebr. 3-29

NEW COLT, Army Special, .38, 6-inch, with Heiser shoulder holster, \$20. No trades. M. H. Heim, 289 Aldrich Pl., Buffalo, N. Y. 3-29

.280 ROSS, new, \$50; Schuetzen .38-55, like new, \$35; Lee 6-mm. Sporter, \$18; Ross Sporter, .303 British, \$18. H. W. Skinner, Barneveld, N. Y. 3-29

WINCHESTER pump, Model 12, 30-inch full, condition perfect, fired 50 shots, new leather case, \$38.50. W. Dangers, Neillville, Wis. 3-29

BRAND-NEW .22 target pistol, imported, 11-inch barrel, a fine, accurate gun, only \$8. Charles Roth, 2884 Ash, Denver, Colo. 3-29

MOULDS to cast lead soldiers, Indians, Marines, trappers, farm and wild animals. Everybody and every child can pour these popular figures without any difficulty. Artistic and substantial, making true-to-nature toys, 210 kinds. Send 10 cents for illustrated catalogue. Henry Schiercke, 1034 72nd St., Brooklyn, N. Y. 3-29

WINCHESTER 52, crank condition, Parker rod and heavy gun case, \$30. Algird Steponaitis, 210 Willow St., Vermilion, S. Dak. 3-29

NICKLE S. A. Colt, .45, 7½ inch, slightly pitted. Ideal No. 4, pot, ladle, cases, primers, \$20. F. J. Paffe, 14 Ribera St., St. Augustine, Fla. 3-29

COLT .45 New Service revolver, 7½-inch barrel, factory condition, \$20. P. A. Wegeng, Norborne, Mo. 3-29

COLT Police Positive, target, caliber .22, Patridge sights, new, perfect, \$25. R. R. Gemmill, 202 Blend, Bay City, Mich. 3-29

MAXIM Silencer for .30 Springfield, excellent condition; price, \$4.50 postpaid. Money order only. J. Little, Chula Vista, Calif. 3-29

AMMUNITION FOR SALE—25,000 rounds caliber .30 for Model 1906 Springfield rifles, packed 20 in carton, 1,000 to case, \$15. L. C. B. San Diego. S. H. Perlmutter, 656 20th St., San Diego, Calif. 3-29

.22 REISING automatic, new condition, spotless in and out; cost \$35. First money order for \$24 takes it on approval. Dr. Morgan, Moro, Ore. 3-29

GUN PARTS, principally muzzle loading; percussion caps, black-powder primers, .30-caliber silencer; describe needs. H. E. MacFarland, Bloomington, Ohio. 3-29

WINCHESTER, Model 12, 12-gauge, 30-inch full, new, \$42. E. U. Peasley, Fairfield, Iowa. 3-29

HIGH-GRADE 3-barrel gun, 12-gauge, 32-40 Damascus barrels, engraved frame, fine condition, \$80. WANTED—Old-time pistols. Box 250, Angela Camp, Calif. 3-29

PREWAR SAUER D. B. 12, self-ejector, 6¼-pound hammerless, 26-inch, Cirassian elaborately engraved; cost \$500; sell for \$150; crank condition; write. A. M. Hyman, 1705 Larimer, Denver, Colo. 3-29

TWO LARGE newly mounted moose heads of the very best class in every way. I will ship express prepaid, duty free, on approval anywhere in U. S. A. to known people. Not a penny of expense to you unless you accept after examination. Reasonable prices. Edwin Dixon, Canada's leading taxidermist, Unionville, Ont., Canada. 4-29

.38-40 COLT, New Service, A1 mechanical condition, \$20; 120 rounds 150-grain .30-06 ammunition, \$5. Rollin Shaw, Sequim, Wash. 3-29

SMITH & WESSON 1917, fine, with 50 automatic rim cartridges, \$17; Colt Officers' Model, 6-inch, fine, \$25; Winchester 20-pump full-choke, fine, \$25. Harry Hartsell, Grinnell, Iowa. 3-29

STEVENS Schutzen rifle, 25-20, in gun-crack condition, reloading tools, double set trigger, 30-inch barrel, \$30. Ford Sells, 1111 Kans. Ave., Great Bend, Kans. 3-29

ONE NEW "LUNA" pistol, latest model target pistol produced by Buchel, similar to the famous William Tell model, but is cocked by a forward motion of ring at base of grip and with a special rear-sight arrangement for greatest accuracy. Shoots .22 long-rifle cartridges, has lateral set for trigger, and two interchangeable front sights, barrel length 12 1/2 inches, between sights 15 inches, weight 2 1/2 pounds, fine leather holster for same; cost \$98.50, will sell for \$70. P. N. Bretz, 21 N. Hanover St., Carlisle, Pa. 3-29

NEW SPRINGFIELD .22 M1, especially selected, and Fecker 10-power scope with Precision mounts, two sets blocks, all new. At \$85, saves you \$25. Capt. Myron G. Browne, Fort Douglas, Utah. 3-29

CALIBER .58 Harpers Ferry 1857 "Mississippi" rifle, Maynard lock, patch box, brass trimmings, sword bayonet, fine order, \$17; UMC .45-70-405 moulds, \$1.15; .36-caliber 2-ball moulds, \$1.75; Army moulds, resizing dies, C. & B. revolvers, nipples, wrenches, spare parts; transportation extra. WANT—Altered C. & B. revolvers. B. K. Wingate, Box 481, Reading, Pa. 3-29

8 x 10 CAMERA OUTFIT, \$35; .45 Colt auto, like new, \$20; 54 Winchester, new, \$38. M. Oylear, Pendleton, Ore. 3-29

SMITH & WESSON .22-32, perfect, with holster, \$22.50. Henry Stebbins, 10 Buffalo St., Oakland, Pittsburgh, Pa. 3-29

AMMUNITION FOR SALE—7-mm. Mauser, \$2.75 per 100; .25-25-86 Stevens, \$6.50 per 100; .45 automatic pistol, \$2.75 per 100; .40-70-330 Winchester, \$4 per 100; .40-85-370 Ballard \$9 per 100; .32 Stevens Ideal, \$5 per 100; .32-35 Stevens taper, \$7 per 100. Also many other calibers. Let me know what you want; can probably supply you. Loading tools and bullet moulds. Cartridges for collectors. S. J. Stagers, 212 S. 42nd St., Philadelphia, Pa. 3-29

COLT .38 Military automatic, fine; 300 cartridges, holster, \$25. William B. Duff, La Grange, Ind. 3-29

BULLETS FOR SALE—303 British, U. S. Mark VII 174-grain; fits Remington, Lee, Enfield, Winchester Model 1895, Ross #1 box. Wm. P. Scott, 345 Broadway, Lawrence, Massachusetts. 3-29

N. R. A. SPRINGFIELD Sporter, perfect, with Nuesslein set triggers, \$50. S. & W. 38 Special Military and Police, 5-inch, perfect, \$26. W. H. Gohdes, The Benedick, 1808 Eye St. N. W., Washington, D. C. 3-29

FINE PRISMATIC TELESCOPE SIGHT, Warner-Swasey Achromatic, cross-hair reticle, very compact, calibrated and compensated for .30-06, with instantly removable offset mount, \$t any rifle, leather case, sacrifice, \$25. All letters answered. Sherzer, 1114 Spruce, Philadelphia, Pa. 3-29

160 ACRES Western Arkansas, good land and climate, game plentiful, \$1,600. D. H. Parker 12, 2 sets barrels, \$75; Francotte ejector, 12, light, \$125; Stevens pocket rifle, .22 W. 15-inch, \$10. Korona prism glass, 6X, \$25. Dr. Yorks, 6865 Hobart, Chicago, Ill. 3-29

COLT .25 automatic, pearl handles, nickel, new barrel, \$10.50; Winchester musket, Lyman sights, \$6.50; Remington .22 auto-loading, \$12.50; Winchester .22, Model 40, \$4.50; Winchester 1892, 25-20 rifle, \$15; Colt .38-40, single-action, \$12.50. Oran Delaney, Greenville, Tex. 3-29

VERY FINE Achromatic range-finding Warner-Swasey prismatic telescope sight, fine case, sacrifice, \$25. All letters answered. Sherzer, 1114 Spruce, Philadelphia, Pa. 3-29

ANTIQUE FIREARMS and lifetime collection of gunrater literature. List to interested buyers. Dexter, 910 Jefferson St., Topeka, Kans. 6-29

FINE REMODELED Krag with complete loading set, 300 primers, \$28.50; write for description; 200 pounds best lead, 10 cents pound. WANT—38 Special primers, any kind. E. A. Hilkert, Knightstown, Ind. 3-29

MODEL 95 Winchester, .30-06, as new, \$40; Colt Officers' Model target, 6 inch, .38 special, good, \$25; .45 single-action Colt, \$20, good. L. D. Wagner, 88 W. Delson Ave., Youngstown, Ohio. 3-29

HOWE-WHELEN sight and Lyman 103 mounted on Springfield firing pin. C. W. Cole, 1046 Union St., Manchester, N. H. 3-29

ONE COLT, .32-20, Army frame, 4-inch barrel, good shape, \$12 cash; one modern, short 7-mm., German Mauser, action complete, Mexican seal on receiver, \$10 cash; one very fine 17-gauge Elgin watch, size 12, in white gold, practically new, \$12 cash. Paul Wright, Box 211, Silver City, N. Mex. 3-29

LIKE new Russian, stock and sights remodeled, 130 new primed empties, \$9.75; Browning fore-end, slight defect, \$3; Winchester tournament stock, Jostam pad, \$12.50; two field grade stocks, \$3 each. Write E. D. Bray, Fremont, Iowa. 3-29

COLT .45 auto, commercial, \$15; Victory Model, \$21; magazines, 35 cents; pouches, 25 cents; 2 barrels, pitted, usable, \$1.50 each; 200 cartridges, 2 cents each; Lefever double 12-28 hammerless, \$19; Peabody .43 Spanish with bayonet, \$3; 350 .40-60's, as are, 1 cent each; 3 5-pound cans FFGF black powder, as are, \$2.50 each; 85 brass Winchester 16's and 30 10-gauge empties, 1 cent each (sealed case .30-06 U. S. S. Co., \$14; shipped from central Illinois); other prices l. o. b. Miami. Money order only. G. Philip Roller, 251 N. E. 54th St., Miami, Fla. 3-29

GENUINE, unused, Ballard Schutzen .22-caliber barrels. Beautifully rifled, can be fitted to any action, \$17; fine .44 percussion revolver moulds, \$2; multiple moulds, same, \$5. List of rifles, shotguns, revolvers, tools and accessories, 10 cents. List of antique firearms, etc. additional 10 cents. Good screw-cutting lathes for sale. P. L. Johnson, 5904 Harvard St., Pittsburgh, Pa. 4-29

500 EMPTY .38 Smith & Wesson special shells, never reloaded, 1 cent each, samples sent. Edwin E. Farr, Wadsworth, Ohio. 3-29

ONE WINCHESTER 5A scope with mounts and blocks. Price, \$25. Factory condition. J. Wilderspin, N. Warren, Pa. 3-29

WINCHESTER .33, dark walnut, oil-finished, chequered stock and fore arm by well-known firm, receiver peep, ivory bead front sight; cost \$95; with 50 cartridges, \$65. Like new; satisfaction guaranteed. Duncan Sharpe, 3743 Mermaid Ave., Seagate, Brooklyn, N. Y. 3-29

WINCHESTER 52 stainless barrel, fired 2,000 rounds, perfect accurate, \$40; Winchester 52, regular barrel, new, never fired, \$34. Q. D. Foster, 201 Lake St., Delaware, Ohio. 3-29

SIX Flyo Indestructible target-shooting targets, \$6 each, postpaid. Box 294, Seneca Falls, N. Y. 3-29

BISLEY .32-20, good, \$22.50; Bisley .41, good, \$22.50. WANT—Colt S. & W. Frontier, any caliber. C. Harner, 1600 Broadway, Springfield, Ohio. 3-29

FIELD MARSHAL Stereo Prism 10-power binoculars, with case, slightly used, \$15. Stanley Pacosa, 61 Main St., Chicopee Falls, Mass. 3-29

.38-40 BISLEY COLT 4 1/2-inch, \$25; Government New Service .45 Colt, model of 1905 (not 1917), fine gun, \$20; 7.65-mm. Argentine Mauser, \$20; .45-70 Government Springfield, shortened fore arm, \$5; two No. 103 Lyman sights, one mounted on Krag cocking piece and one on Springfield, both perfect, \$9 each without disc. 5-A Winchester scope No. 2 mounts; post reticle; bluing well worn in places, but inside fine, \$30, including good Winchester leather case. L. J. Hathaway, c/o THE AMERICAN RIFLEMAN. 3-29

STAMPS, Stamps, stamps, FREE! Airmail, animal, statue stamps, over 100 different, 2 cents. Mitchell Stamp Co., Mt. Rainier, Md. 3-29

WHY NOT shoot .45 Colt ammunition (Government) at 1 cent per in S. & W. 1917 having both regular auto, and Colt .45 bore cylinders interchangeable, \$32.50 complete; S. & W. 44 Special Military, with extra .44-40 bore cylinder, interchangeable, \$37; the .44-40 cylinder alone, \$7; die to resize .30-06 cases to .270 caliber, \$2. Ray Welker, 406 N. Harvey Ave., Oak Park, Ill. 3-29

SAVAGE .25-20 Lyman, gold bead, front sight, Savage rear peep, oil-finished stock. Ideal No. 3 reloading tool for .25-20; Hartford .22 auto. pistol. Both crank condition for best offer. Lloyd Schnell, R. F. D. No. 1, Milan, Ohio. 3-29

9-MM. LUGER, 8-inch barrel, detachable stock with holster, fine. WANT—Winchester 5A scope, or .38 Special target revolver. A. E. Michaelson, Zumbrota, Minn. 3-29

OBSOLETE CARTRIDGES—Write your wants. Empty rifle and revolver cartridges, also shotgun shells, reloading set, primers, crimpers, gun grease, etc. Extra pistol clips, supplemental chambers. Cartridges for the collector. Stamp, please. Chas. Shattuck, R. F. D. No. 10, Dunkirk, N. Y. 3-29

52 WINCHESTERS, factory new, \$34; .45 Colt automatic, perfect, \$24; .44 Smith & Wesson, good, \$12.50; .38-40 Colt single-action, fine, \$16; Remington automatic, 12-gauge, fine, \$35; Winchester 1897, 12-gauge, fine, \$25. WANT—30-06 Krag and Russian 7.62 cartridges, .22 Stevens tip-up pistol, 3 1/4-inch barrel. D. O. Amstutz, Ransom, Kans. 3-29

.22-32 S. & W. TARGET REVOLVER, fine condition, \$18. Chas. Rueger, 2 Highland Ave., Piedmont, Calif. 3-29

GUNSTOCK BLANKS:

"Our Beautiful 'Tiger Flame' maple and walnut, 'Tough as Hickory and hard as nails,' cuts 'The Better Blanks.' Stock-making instructions free. Descriptive treatise: 'Gunstock Blanks of Flaming Beauty' for stamp. BELL, 'The Gunman,' Lewistown, Pa. 3-29

.38-40 S. A. COLT, 5 1/2-inch barrel, fired 50 times, perfect in and out, \$22.50. Henry T. Kelsey, Alpine, N. Y. 3-29

S. & W. .22-32, in fine condition, barrel perfect, \$20. E. L. McEwen, Massillon, Ohio. 3-29

BOND MODEL B reloading tool, .45-70, extra parts for .30-06, .30-40, 7.62 Russian, good order, \$10. Marshall Morr, Ashland, Ohio. 3-29

.22 SAVAGE, MODEL 1919, complete with Savage pump, \$95; Marble's adjustable and No. 5B Lyman combination front, in perfect condition, \$15. R. C. Parry, Walnutport, Pa. 3-29

.32-40 MARLIN repeating rifle, Model 93, 26-inch octagon barrel, 10-shot, fine condition, \$18.50. Humphrey, Union Trust Bldg., Indianapolis, Ind. 3-29

12-GAUGE REMINGTON PUMP, Model 10, perfect inside, \$35. Government Model Colt .45 auto, perfect, with Audley holster, \$27. W. F. Herzog, Center Moriches, N. Y. 3-29

BOND .25-caliber double-cavity mould, perfect, \$3; Ideal adjustable .32-40 mould, perfect, \$3; new mould and reloader, 50 express, \$3. Postage extra. Maynard rifle. Other guns. List, 5 cents. Fred Wainwright, Grayling, Mich. 3-29

.22 WINCHESTER automatic, Model 1903, barrel perfect, outside very good, Lyman peep, \$23. W. T. Swift, Lake Placid, N. Y. 3-29

.25-20 MARLIN REPEATER, Model 1894, lever action, new and perfect, peep sights, tools, \$30. J. E. Wellington, Wellsville, Ohio. 3-29

LEMAIRE 8X with mil scale, individual focusing, shows wear, but good, \$20; or trade for Ideal No. 2 sizer-lubricator. Melvin Nelson, 786 E. Madison, Portland, Ore. 3-29

STEVENS .438 scope with mounts, perfect shape, \$25. Russell Johnson, 85 Boston Ave., West Medford, Mass. 3-29

.32-40 SHARPS-Borchard-Schutzen, weighs about 12 pounds, Winchester barrel, Circassian-walnut stock, chequered pistol grip, cheek rest, palm rest, heavy butt plate, set triggers, Fecker blocks, Vernier sights, 4 moulds, Ideal tool, fine rifle, \$65. Wilkens, 2237 Park Ave., Norwood, Ohio. 3-29

WINCHESTER 52, 2 magazines, sling, \$28; Winchester .25-20 carbine, ivory bead front, sling, \$18; Colt .44-40 Frontier, \$12. H. A. Sherlock, 1028 Tusac St., W. Canton, Ohio. 3-29

FANCY-GRADE .38-56, Model 86, Winchester, shells, tools, \$45; .32-40 Winchester Schutzen out fit, shells, tools, \$35; New Model 52 Winchester, extras, \$30; Remington double hammerless 12-32 ejectors, \$25; S. W. prewar .44 Special, triple lock 7 1/2-inch barrel, milled trigger, target sights, \$45; trade Ballard action, single trigger, loop lever, fine, for .22 barrel, new stock and butt plate, for Colt Woodsman. Harry Davison, Box 76, New Franklin, Mo. 3-29

FULL-LENGTH shell-resizing dies for .38 Special, .45 Colt, .380 and .45 automatic, \$1 postpaid. McCaslin, Centralia, Kans. 3-29

.25 ROBERTS, Mauser, Niedner 24-inch barrel; Lyman sights, reloading tools, 100 shells, 7 1/4 pounds, new, \$75; .250-3,000 Mauser short action, .24 Niedner barrel, Lyman sights, Ideal tool, 7 1/4 pounds, fine, \$65; Springfield Sporter 06, Niedner chamber, Lyman No. 48, Hensold scope 4X; Noake mount, 8 pounds without scope, shells, fine, \$80; Zeiss binoculars, 8 x 24, 14-ounce, case, fine, \$38. Winchester trap 12-28, rib barrel, full, new, \$75. Write for better description of above. J. L. Baker, 208 N. 4th St., Mechanicsville, N. Y. 3-29

IMPROVED action for .22 target rifles. Finely made by hand, \$30. Photo, 10 cents. E. F. Hedrick, 1705 N. Broadway, St. Louis, Mo. 3-29

6.5 MANNLICHER-SCHOENAUER takedown, factory new, never fired, leather case, \$75 cash. AMERICAN RIFLEMAN, February 15, 1924; April, June, July, August, September, 1928. WANT—July 1, 1923; January 15, 1924; May 1, July 1, August 1, 1926. E. E. Bement, 1026 Ellis St., San Francisco, Calif. 3-29

REMINGTON AUTOMATIC 12-32 full, excellent condition. Newton 30-06, like new; fancy Marlin 30-30, fine; Colt .38 Special, 6-inch, perfect, with holster; Winchester 40-82 repeater, good; Winchester 1890 .22 Special, good. All bargains. H. Clark Heath, Rochelle, Ill. 3-29

VION 45-power telescope, good condition, \$25; Winchester Niedner No. 2 mounts, tapered bases and blocks for heavy barrel, \$15. J. A. Wade, Box 214, Boise, Idaho. 3-29

PRICED AUCTION Sale catalogues of antique firearms collections \$1 to \$3, Sawyer's Vol. I, \$5; Vol. II, \$21; Vol. III, \$7.50; catalogue U. S. C. Co. Collection, \$4.50; "Magazine Antique Firearms," \$4; "Stock and Steel" complete, \$7.50; Simeon North "First Official Pistol Maker," \$8.50; .32 r. f. S. & W. \$11; .38 S. & W. 1881 model, \$14; .32-20 Bleyer Colt 4 1/2-inch, \$24; .44 Colt lever action, poor, \$8.50; .45 Sharps Buffalo rifle, 16 1/2 pounds, \$40; 100 other pieces. State what you want. J. C. Harvey, 880 Main St., Worcester, Mass. 3-29

SMTH Double 12x30 trap-grade ejector, nearly new, \$60; also Krag carbine. Walter Ellis, Box 589, Buffalo, N. Y. 3-29

NEW Krag rifle, 22 1/2-inch barrel, handmade French-walnut stock, by Clyde Baker, pistol grip, checkered, checkpiece, gold shield for initials, Lyman receiver sight. Cost \$100. Make offer. R. C. Skaggs, 2040 Gerber Ave., Sacramento, Calif. 3-29

MODEL 91 S. & W., .22, 10-inch barrel, perfect condition, guaranteed. Homer M. Fish, 682 Brooklyn Ave., Oakland, Calif. 3-29

SAVAGE .32 automatic pistol, like new, for \$12. C. G. Taylor, Sibley, Iowa. 3-29

NEW PARKER 12-gauge V.H. \$40; Marlin lever-action .22, bore perfect, tang peepsight. G. A. Martin, 158 Wentworth St., Charlestown, S. C. 3-29

.44 Colt cap-and-ball revolver in fine condition with single mould casting conical bullet—this arm is in fine polished condition with perfect stocks—\$15. Box of miscellaneous revolver parts. This lot includes 35 miscellaneous cylinders, frames, hammers, triggers, barrels, rifle actions, etc. Fine lot for gunsmith, \$12. Money order or certified check. Vergne A. Nixon, Lake Villa, Ill. 3-29

SET TRIGGER for Springfield, both .30 and .22. Fits in seat; no metal cut; easily attached; \$15 C. O. D. Send for circular. Elliott Bros., makers, 342 E. 4th St., Los Angeles, Calif. 5-29

STEVENS Ideal .25-20 single-shot, bore spoiled, rifle good otherwise, with 50 factory cartridges, \$7. Jas. Langwill, Tomah, Wis. 3-29

FOUR-BARREL Sharp square rubber butt, rare, .30-caliber, \$8.50; French needle gun, fine, \$10. Frank Shaw, Pacific Grove, Calif. 3-29

30-CALIBER 06 regular Government Springfield barrels; in very good used condition; every barrel guaranteed not to be pitted, metal-fouled, rusted or shot-out; \$3 each postpaid. F. R. Fawcett, 162 17th Ave., San Francisco, Calif. 3-29

EIGHT-POWER Stevens rifle scope with mounts, perfect condition, \$25; 10-power, Henold's Dial, field glass, perfect condition, cost new \$160, sell for \$100; five 1 C. S. books on boilers and engines, cost now \$17, sell for \$10. L. B. Reiter, Box 884, Ashtabula, Ohio. 3-29

IDEAL LOADING TOOLS—No. 3, double adjustable chamber, caliber 25-35; No. 4, .38-40 caliber, both in very good condition, \$3 each. WANT—25 Krag single-shot rifle; .38-40 Colt Bleyer 5 1/2-inch barrel, George A. Hauner, c/o Newark Shoe Store, Ithaca, N. Y. 3-29

ITHACA field grade 12-32, full choke, \$20; .30-30 Winchester carbine, \$20; .22 Savage Sporter, Lyman peepsight, \$15. E. W. Mangle, Stuyvesant, N. Y. 3-29

GUN-STOCK checking tools, \$5 set; includes following tools: Fine, medium, coarse spacers, double end V-cutter, bent Swiss file, flexible steel straight-edge, full instructions, special border tool, \$1.50. Satisfaction guaranteed or money refunded. R. J. Snyder, Pine Castle, Fla. 3-29

U. S. ENGINEERS marching compass, cost the Government \$24.50 each. Complete with floating dial, focusing eyepiece, sights, and leather carrying case. \$2.50. Chester Nikodym, Box 1797, Cleveland, Ohio. 3-29

COLT Bleyer .32-20 target 7 1/2-inch, \$50; Marlin .22, Model 89, Lyman sights, \$21; Ithaca 20-gauge hammerless, new, \$29; Remington 12-gauge pump, \$33; Colt Army Special, 6-inch, blue, \$21; Colt Police Positive .22, \$21; Colt .38 Military auto., \$25; Smith & Wesson .32 hammerless nickel, pearl, \$18; Western field, 12-gauge pump, raised rib, 30-inch, \$27; Ithaca No. 2, 12-gauge ejector, \$44; Hamilton 21-jewel railroad watch, late model, white gold, \$42. Guns fine condition, guaranteed. Henry Day, Exeter, N. H. 3-29

POPE-BALLARD .35 M/L double set, No. 4, 30-inch octagon, entirely complete, guaranteed perfect, fired less than 500 shots; lot of extras; machine-rest groups furnished; \$60. Several 32-40 moulds, cheap. Details for stamp. Claude Roderick, Saint Clair, Mo. 3-29

SEVERAL trap guns, single barrels, repeaters, and double barrels, high-grade imported field and duck guns, several big bores, Model 1895 Winchester, .30-06, solid frame, takedown; carbines, 1886, 45-90, .50-110 Express, Lugers, Colts. Firearms list, 10 cents. N. P. Fraysteh, Milan, Minn. 3-29

1903, 1906, 1917, 30-CALIBER ammunition for U. S. Service rifles, \$15 per 1,000 f. o. b. San Diego. Noah's Ark Salvage Co., 531 Market St., San Diego, Calif. 3-29

IMPORTED English Circassian-walnut sporting gun stock blanks, \$2.75-45; American-walnut blanks, \$2.50; blank horn fore-arm tips, \$2.75; sporting type butt plate, \$3; same with trap, \$5; rubber pistol-grip cap, \$1.25; Miller checking tool, \$3.50; Nimrod gun blue; blues without heat by chemical action alone, \$1; Colonel Whelen sporting slings, \$2.50; Snap release swivels, \$2.50. Chester Nikodym, Box 1797, Cleveland, Ohio. 3-29

MAUSER 9-mm. pistol with wooden holster-stock and leather carrying case, excellent condition; also Bausch & Lomb binoculars, with leather case. Frank T. Sherwood, Menlo Park, Calif. 3-29

ADJUSTABLE aluminum international butt plates for Springfield and Winchester .52, .55; regular international butt plates for Winchester .52, Springfield and Savage N. R. A., \$2.25; in rough, \$1.25; thick aluminum butt plates for Winchester .52 to lengthen stock, \$1.50; new Kerr web slings, 75 cents; used leather Service slings, 75 cents; sheepskin pads, shoulder, \$1, elbow 75 cents each; B. & M. polished-steel cleaning rods, \$2.40; Miller checking tool, \$3.50. Chester Nikodym, Box 1797, Cleveland, Ohio. 3-29

SELL OR TRADE

FECKER scope and mounts, 6X, 3/4-inch objective, thin cross wires, new and absolutely perfect, \$36.50. WANT—Stevens 4 1/2 Model 54, for Model 6 or 6 1/2 Ballard actions or complete rifles. Actions must be perfect. W. H. Janassen, Nokomis, Ill. 3-29

NEW COMMERCIAL .45 auto, Colt, latest model, in absolutely perfect condition, with Heiser shoulder holster, never used. Sell for \$30 or trade for hunting scope or Winchester 5A with mounts. V. T. Smith, c/o W. O. L., Annapolis Hotel, Washington, D. C. 3-29

COMPLETE Library American Law, 14 volumes, especially adapted to students or business men, never opened, valued \$100; will sell for \$50 or trade for new Camp Perry Colt or some similar arm or rifle. C. R. King, 1754 East Florence Ave., Los Angeles, Calif. 3-29

ITHACA No. 4 ejector single-trap shotgun, 32-inch, heavy comb, 14-1 1/2 x 1 1/2, heavy leather case, all new, \$90. Or exchange only on Pigeon, veal-laid; or Setter bred by Eugene Ghost or Phil Essig. Fred R. Knodle, 429 Burton Ave., Washington, Pa. 3-29

6-TUBE A. C. Atwater-Kent radio with tubes and speaker, \$75. Other bargains in radio. Buffalo robes to sell. WANT—30-caliber Mauser with wood holster stock. H. L. Phillips, Norwood, N. Y. 3-29

RUSSIAN SPORTER, unopened case ammunition, \$30; Ross .303, unopened case ammunition, \$25; Remington 12 auto., \$40. All fine. WANT—Hunting scope, mounts, .20 or .410 double, or pistols. Johnson's Pain Store, Olympia, Wash. 3-29

L. C. SMITH DBL new, 12-gauge, ventilated rib, beaver fore end, single trigger, auto, ejector, Hawkins pad, 32-inch, R65, L70 stock 14 1/2 x 2 1/2 x 1 1/2; \$130. WANT—High-grade Springfield Sporter with loading tools. G. H. Bacon, Box 372, Lawton, Okla. 3-29

FINE PREWAR Mauser 7.63 carbine pistol; Zeiss 8-40 Delatic binoculars, excellent; Winchester 22 auto. rifle; Noske telescope mounts; three excellent tanned bear skins. WANT—30 and .22 Springfield Sporters, A1 spotting scope, Frank Zlatnik, 737 S. Harrison St., Pocatello, Idaho. 3-29

TWO INDOOR target carriers (without ropes). WANT—Ideal tools for Springfield and Krag. W. V. Blackwell, Box 311, Miami, Fla. 3-29

HEAVY FRAME .22-caliber Police Positive Colt revolver, fired less than 100 rounds, \$22; Pacific Ballard action and stock, set triggers, \$12.50; Winchester palm rest, new, \$5. WANT—38 revolvers, or .22 S. & W. pistols with Pope or Wilburn barrels. Carl Wahner, M. D., 1127 11th St., Sacramento, Calif. 3-29

.22-32 S. & W. TARGET, like new; Winchester .22 auto., barrel new, 5 x 7 camera, R. W. lens, good for gun photos; Skeet practice trap. WANT—Hensoldt Ideal Dialy, or Mirakel 7-power; Schmidt-Haberman Mauser; .32-20 or .25-20 single-shot (good only); powder scale. F. E. Lynch, Brocton, N. Y. 3-29

SMITH & WESSON, Military and Police .32-20, 5-inch, new condition. WANT—Springfield .22, Winchester .52, Colt or S. & W. .22 or .38 Special. Edward Peppard, Pontiac, Ill. 3-29

WINCHESTER .351 automatic, perfect condition. WANT—Colt .22 target pistol; Winchester rifle scope. E. D. Upson, Madison, Wis. 3-29

IDEAL moulds and tools; .32 S. & W., .38 Colt S., 25-35 W., 45-70 G., 45 Colt, .32 Colt N. P., 32360-P-32317GS-25720, P-25719. Leslie Way, 4752 S. 13th St., S. Omaha, Nebr. 3-29

EIGHT-TUBE Portable Super Hetrodyne radio, stripped, worth \$40. WANT—Winchester .52 in good condition or Colt .22 auto., rebuilt Krag with loading tools, or something of equal value. Also want Clyde Baker's "Modern Gunsmithing." Howard S. Clements, Lyons, Nebr. 3-29

WINCHESTER 97, 12-gauge, 28-inch, full-choke, takedown in very fine condition, \$30. Paul Gibson, 715 Dela. Ave., Oakmont, Pa. 3-29

"SHOOTING AND FISHING" or trade for gill-edge No. 52 Winchester. C. B. Pratt, 29 Ayres Court, Franklin, N. H. 3-29

.256 BUFFALO NEWTON, new condition. WANT—Model 12 Winchester, 20-gauge, full. E. Goetichius, Medical Lake, Wash. 3-29

MARLIN, Model 1894, .32-20 rifle, good condition, new barrel, \$22.50; or trade for Marlin, Model 27, .25 rim-fire repeater; must be A1 condition. Warren Henry, Stanton, Ala. 3-29

EXTRA FINE fly rod. WANT—Colt .45 automatic or 1917 S. & W. or Colt. What have you? E. J. Hofheinz, Box 544, Austin, Tex. 3-29

WINCHESTER .270, never used, 20 cartridges, for \$40. Or trade for perfect .30-06 Springfield Sporter. Chas. Young, 1701 Grand, Alameda, Calif. 3-29

SAVAGE .22 with rear peepsight, as furnished on N. R. A. model; good condition. For Remington .22 short auto-loading or pistol or automatic. Merle Simpson, 707 N. Y. Blvd., Sea Girt, N. J. 3-29

FOR SALE OR TRADE—One 1886 Winchester .50-110 Circassian pistol grip walnut stock, fore end half octagon, half-round barrel, 3/4 magazine, very good condition, \$50; one Savage 03 .22-caliber new barrel, \$15; one Spencer carbine, one Starr carbine, one Evans, one Burnside, new; one 1863 Springfield remodeled to .50-caliber breech-loader; one single-shot Mauser, 11-mm.; one 1883 Marlin; one 1876 Winchester. Best offer on these relics. WANT—10-50 Bausch monocular; old frontier bolt revolvers, barrel and cylinder condition immaterial; Winchester single-shot heavy-action rifles; Winchester 1873, .22-caliber rifle. R. E. Brown, 124 Franklin Ave., Bend, Ore. 3-29

WINCHESTER .22-caliber 1890 model, .22 long-rifle pistol grip checkered fancy walnut, factory condition. National Sportsman magazines from 1912 to 1927 and Outdoor Life from 1922 to 1927. Also AMERICAN RIFLEMAN from August, 1924, to 1928 for best offer. WANT—Savage .25-20 or Colt or Smith & Wesson .22 target for the above Winchester in same condition. J. J. Donohue, Wakonda, S. Dak. 3-29

.38-55 PETERSON-BALLARD, plain stock and action, double set triggers, barrel perfect, \$35; Winchester .22 WCF single set, slightly pitted, \$20. WANT—Springfield .30 M1 .45 auto, commercial, 44 Special, single-action Army. Joseph Williams, Box 121, Atascadero, Calif. 3-29

12-GAUGE Winchester pump gun, .22 Remington automatic, fine shape, for .22 M1 Springfield, new condition. Gerhard Malley, Hillsboro, N. Dak. 3-29

RABBIT HOUND, one year old, working fine. WANT—Springfield .30-06, first-class shape. John H. Schuster, Berlin, Wis. 3-29

COLT .38 Special, .380 Savage automatic, both perfect; new fancy sporting stock for Krag. WANT—Latest model Winchester .44-40 or .25-35, good shotgun, or large-caliber revolver. McCaslin, Centralia, Kans. 3-29

MODEL 12A REMINGTON .22 rifle, for Colt .22 automatic; will pay difference. J. E. Defenbaugh, Herington, Kans. 3-29

.45 AUTOMATIC Colt, 3 magazine, extra barrel, 200 cartridges, \$20; OR TRADE for Springfield, .45 D. A. Frontier revolver, \$12.50; Krag, \$10; all in good condition. John Freitag, 2156 N. Kilbourne, Chicago, Ill. 3-29

REMINGTON EXPRESS, .30-06, never fired, for same in .25-caliber; handmade stock for above, also one for Krag, to trade for Winchester SS barrel and action, .22 or .32-40-caliber, Fairbanks powder scales, Ideal measure, .25 Remington tools; photo of stocks for stamps. A. C. White, Grove City, Pa. 3-29

MILITARY Springfield, star-gauged, perfect, fired 150 times, for standard compound microscope; Colt .44-40 D. A. Frontier, \$12, or trade for type EE field glasses or a .22 handgun. L. J. Sharpe, 410 1/2 Montgomery St., Syracuse, N. Y. 3-29

MAUSER KAR. 98 carbine 8-mm., Colt S. A. .45. WANT S. & W. or Colt 1917, Lefever 20-gauge, single, or what have you? D. Ryan, 752 Washington Ave., Memphis, Tenn. 3-29

EXCHANGE Russian rifle, remodeled Griffin & Howe, for light .22 single or repeater. Letters first. W. H. Fluck, Newfane, Vt. 3-29

WINCHESTER .351 Savage .22 H. P. WANT—Remington, Model 30, .25-caliber. D. V. Hester, Lexington, Tex. 3-29

.32-20 COLT repeating rifle or double-barrel muzzle-loading shotgun for .44 or .45 Colt single-action revolver. K. L. Swigart, Windham, Ohio. 3-29

WINCHESTER 1894 carbine .30-30 peepsight, fair condition, accurate. WANT—Springfield or Enfield, like condition. Frank Henkle, Minong, Wis. 3-29

S. & W. 45, Model 1917. WANT—S. & W. Colt .22 target revolver or pistol. C. Glidden, 409 School St., Watertown, Mass. 3-29

300 SAVAGE lever, Lyman sights, new condition. WANT—16 double, same condition. Lonnie Bruns, R. F. D. No. 3, Anaheim, Calif. 3-29

CASE Springfield ammunition for Krag ammunition or guns. H. Ross Johnston, 520 S. Jefferson, Springfield, Mo. 3-29

ELWOOD'S taxidermy course, Smith's and Burns' wrestling courses, value over \$50, for 22 or .380 pistol, or other firearm. A. Langhus, Shelly, Minn. 3-29

TRADE fine diamond rings for good guns. Prefer trap guns, or what? Dept. G, State Bank Bldg., Granville, Ill. 3-29

\$100 RADIO for 52 Winchester, factory condition; 45 automatic Colt for 52 Winchester, pitted barrel. George DeVault, Mt. Pleasant, Pa. 3-29

WINCHESTER takedown, .30-30, octagon 26-inch, nickel-steel, fine. WANT—Springfield Sporter, style N. R. A., fine. Chas. Nichols, Braman, Okla. 3-29

RADIO SETS and radio parts for guns, or what have you? M. E. Eaton, Olney, Tex. 3-29

KRAG Sporter, drafting course, drawing outfit, for Krag ammunition, "Modern Gunsmithing" (Baker). SELL—Blue prints for real gun cabinet. Ford Osgood, 305 E. Chestnut St., Lisbon, Ohio. 3-29

20 KODAK SERIES III, new condition. Trade for .22 Colt Woodman, like condition, or sell, \$22. W. T. Swift, Lake Placid, N. Y. 3-29

GREYHOUNDS AND STAGHOUNDS TRAINED ON COYOTES AND JACK RABBITS. Two extra fine elk teeth. What have you? Ira Salley, Liberal, Kans. 3-29

TRADE—250 SAVAGE 99G special sights, crank condition, for 250 bolt .30-06, or what have you? Percy J. Bryan, Arcata, Calif. 3-29

EXCHANGE—Remington, Model 11E, full 28-rib, pad, perfect, for high-grade double 12. C. F. Tilton, Ashland, Oreg. 3-29

TRADE—B. & L. 8-power prism binoculars, Anasco 2 1/4-inch x 4 1/4-inch case, tripod. WANT—22 auto, or other pistols. Ivan R. Tomkins, U. S. Dredge Morgan, Savannah, Ga. 3-29

BISLEY .38 Ivory stocks, good. WANT—Single-action Smith & Wesson, 44-45, or double shotgun. Harry Allen, Carthage, Mo. 3-29

KRAG CARBINE, fine stock; offhand Stevens .22, 8-inch barrel; both nearly perfect. WANT—Good revolver. George Courtney, 2721 Sagamore Road, Toledo, Ohio. 3-29

NEW No. 8A Remington .35 auto. rifle to exchange for Winchester 54, .30-06 carbine, with Lyman micrometer rear sight, same condition. Dr. Garrard, La Grange, Tex. 3-29

SEVEN genuine elk teeth for Remington auto. rifle .35 or Browning auto. 16. Must be in perfect condition. P. F. Geiger, Parshall, N. Dak. 3-29

REMINGTON auto. 12 full, like new, for 22 long rifle, S. S. set trigger rifle or rifle and scope, 8-pound, 28-inch barrel preferred. Floyd Holloway, Clovis, N. Mex. 3-29

No. 1 KODAK special Illinois watch, portable phonograph, handmade fly rod, binoculars. Colt N. S. 38-40, Icarate camera, f.4.5. Frank Wilkinson, 82 Monticello, Buffalo, N. Y. 3-29

WANTED

OLD GUN CATALOGUES. The Rifle, 1885; 88 Ballard .50-115 rifle; Dalgren knife bayonet; cartridges, .58-caliber; many other sizes. Fred Wainwright, Grayling, Mich. 3-29

WANTED—Star-gauged National Match Springfield. Must be in first-class condition. Privilege of examination at express office required. E. E. Sellers, Adamsville, Ala. 3-29

WILL pay cash for heavy Sharps Buffalo rifles weighing from 12 to 18 pounds; prefer with octagon barrels and in first-class shooting condition. Also want Sharps ammunition in various sizes. Write M. C. Clark, 510 West 50th St., Los Angeles, Calif. 3-29

WANT—Frankford Arsenal cases, Krag, fired once, good; Luger 8-inch barrel and receiver; Luger drum magazines. J. Auxier, Pikeville, Ky. 3-29

WANTED—22 Smith & Wesson, 10-inch, single-action pistol, Model 1891, gun-crank condition. Wm. Sims Bunn, Nashville, N. C. 3-29

HUNTING SCOPE and loading tool for .256 Newton, also .30-40 Army and .256 Newton ammunition. Sell or trade for 22, 303 Ross Sporter. Ray Scott, 700 10th St., Bismarck, N. Dak. 3-29

WANTED—An old-timer in the shooting game—who has given more of his time and money to the sport than he probably should have done is in the market for a good .22-caliber heavy-barrel rifle. Any members of the clan having such an outfit which may be willing to dispose of to help out this old-timer will be doing a good turn by communicating with the Secretary, National Rifle Association. 3-29

WANTED—30 Government Springfield Sporters, free rifles, complete, practically new, extremely accurate, cheap; Maxim silencers. Give detailed specifications. SELL—45 automatic Colt outfit, bluing worn, \$18. Lawrence Heath, Nemo, S. Dak. 3-29

WANTED—40-70 bottle-necked ammunition, 370-grain bullet. L. D. Clarke, 201 Mass. Hall, Hancock, N. H. 3-29

WANTED—A FEW fine Kentucky rifles. W. F. Saybolt, M. D., 35 Greenway Terrace, Forest Hills Gardens, L. I., N. Y. 3-29

WANTED—Bond reloading tool, Model C complete; also powder measure. E. E. Sellers, Adamsville, Ala. 3-29

WANTED—Spotting scope, carrying case, Winchester 5A scope. Emil Swatos, 1254 South 15th St., Omaha, Nebr. 3-29

WANTED—.22 Colt double action or automatic. State condition, age and price. Neil Baldwin, Box 2063, Spokane, Wash. 3-29

WANTED—Guns of all kinds if priced to sell. Give lowest price in first letter. Box 103, Romeo, Colo. 3-29

WANTED—Fecker 1 1/4 objective scope with or without mounts; .30-40 Winchester 1895 carbine; .25-20 Savage Sporter if perfect in all, and .25 Colt auto. TRADE OR SELL—.38 A. G. P. barrel, poor, \$10; .22 Savage Sporter, few slight pits, but very accurate, \$9; and spotting scope 2 1/4-inch objective, old but lenses perfect, \$8. John H. Avinger, Avinger, Tex. 3-29

WANTED—OLD-TIME COLT AND REMINGTON revolving rifles, cap-and-ball; Colt Dragon revolvers; bullet moulds. B. Smiley, Angola, Ind. 3-29

WILL PAY CASH for any type and quantity of cap-and-ball revolvers or pistols in good condition, particularly if in cases with accessories. Write, giving description and price. McMurdo Silver, 846 W. Jackson Blvd., Chicago, Ill. 4-29

WANTED—A FEW fine Kentucky rifles. W. F. Saybolt, M. D., 35 Greenway Terrace, Forest Hills Gardens, L. I., N. Y. 4-29

HIGH PREMIUMS paid for all rare coins. Price list, 4 cents. Send today. Zenas F. Mattson, A4, Centerville, Wash. 5-29

WANTED—The following copies of AMERICAN RIFLEMAN for 1928: January, February, March, April, June, September, November and December. Leslie M. Lindahl, Central City, Nebr. 3-29

WANTED—Graflex or Graphic. State lens, size, equipment, condition, price. Also 8X Bausch binocular. K. H. Munroe, 21 E. Holly, Pasadena, Calif. 3-29

WANTED—Several spotting scopes, condition immaterial, except lenses must be good, 32-inch focus, and cheap. S. B. Markley, McCune, Kans. 3-29

WANTED—Schuetzen rifle, fancy stock, 22 preferred. Send for list of guns. E. S. Rue, 808 Ash St., Scranton, Pa. 3-29

WANTED—S. A. Colts .38, or .38 auto., '17 S. & W. or Colt revolver, Mauser pistol, Sharps heavy rifle, binoculars. W. W. McGowan, 1906 Hillside Ave., Springfield, Ohio. 3-29

WANTED—Tools for Savage 250; complete set. John Smurthwaite, Premier, B. C., Canada. 3-29

WANTED—Reliable second-hand powder scale, capable of weighing 1/5 of a grain. Austin Morse, 322 High St., Berlin, N. H. 3-29

BOUGHT, SOLD AND EXCHANGED

GUNS, rifles, revolvers, outboard motors, cameras, binoculars, musical instruments, stamps, anything of value bought, sold and exchanged. Wagner's, 522 R. Market St., Philadelphia, Pa. 3-29

MISCELLANEOUS

KRAG AND RUSSIAN rifles remodeled. Stocks reshaped, refinished and front sight fitted; plain, \$5; checked, \$7.50 and \$10. Cash or trade. McCaslin, Centralia, Kans. 3-29

BOLT-ACTION stocks made to your specifications, \$18 and up. All kinds of repairing and remodeling. Send stamp for price list. Fred Roth, Twain, Calif. 3-29

PLAIN OR FANCY Restocking and remodeling of Springfields, Krags, Russians, at prices to suit anyone. F. G. Karlson, Slater, Wyo. 3-29

U. S. NAVY binoculars. Made to finest specifications. Get the benefit of 100 years of experience in selecting the best field glasses and binoculars. There are no better at any price. All are marked U. S. Navy, and have sole-leather cases. Originally cost enormous sums; A1 perfect condition. American manufacturers; limited supply. Worth double what we ask. Firearms taken in exchange. Don't confuse with cheap imported stuff. A souvenir of the great World War. Cleveland's Gun Shop, 707 Second Ave. S., Minneapolis, Minn. 3-29

WE WILL extend the subscription for one month of any subscriber sending us a December or November, 1928, issue of THE AMERICAN RIFLEMAN. 3-29

A MODEL 52 Winchester target stock of plain walnut, full pistol grip, swivels, shotgun butt plate, oiled, rubbed, for \$20. Moderate charges for checking, checkpiece, fancy walnut, etc. Pattern (for comparison), full description and photos on receipt of order. Perry D. Frazer, Ridgewood, N. J. 3-29

GUNSMITHING, restocking, skilled repairing. Duplicate parts made for obsolete firearms. James Macdonald, 65 Paradise Rd., Swampscott, Mass. 3-29

THE APPEARANCE and value of your gun can be greatly improved by fine, ornamental engraving. G. M. Butler, 221 Spencer Ave., Carrick, Pa. 3-29

ANTIQUE GUNSMITHING:

Our old-time gunsmith, possibly the greatest living authority, will recondition your Kentucky rifle into "rackhole" accuracy. Few like ones for sale. BELL, "The Gunman," Lewistown, Pa. 3-29

KRAG AND RUSSIAN RIFLES remodeled, cut off barrel and remodel stock to sporting type, complete, \$6.50. S. H. Fryer, Jr., 820 Hancock Ave., Vandergrift, Pa. 4-29

GUN-RESTOCKING—Plain or fancy Springfields, Krags and Russians specially. Prices reasonable. J. C. Denham, 8 Spring St., Xenia, Ohio. 8-29

SEE WHAT \$4.75 WILL DO!—It will buy a year's subscription to *Field and Stream*. It will buy a year's subscription to *THE AMERICAN RIFLEMAN*; and, to American citizens of good standing, the subscription to *THE AMERICAN RIFLEMAN* will also include a year's membership in the National Rifle Association! Where can you get more for your money!

GUNSMITHING—Restocking a specialty. Prices reasonable. William Bailey, Lisbon, N. H. 12-29

OUTDOOR LIFE AND RECREATION combines in a single magazine the most popular features of two great publications—*Outdoor Life* and *Outdoor Recreation*. Published at Denver by John A. McGuire, the new combination is continuing the traditions of *Outdoor Life* and offering an even larger proportion of stories and articles on big-game hunting and rifle shooting. The great Gun and Ammunition department is divided between Colonel Whelen, in charge of the Rifle and Pistol section, and Chas. Askins, on the shotgun. The new magazine is considerably larger than either of the two publications which have been combined and the increased space is permitting a far wider variety of gun and hunting material in every issue. The price of the new publication is twenty-five cents a copy, \$2.50 a year—the lowest price at which any outdoor magazine of equal size can be secured. As a special get-acquainted offer to readers of *THE AMERICAN RIFLEMAN*, a trial five issues will be sent for \$1. *Outdoor Life and Recreation*, 1802 Curtis St., Denver, Colo. 11

HUNTER-TRADER-TRAPPER—The largest magazine of its kind in the world. Devoted to hunting, fishing, trapping, camping and every phase of outdoor life. Articles every month by the leading writers in their respective fields. Everything facts, no fiction. Send us \$1 for our special "Get Acquainted" offer, consisting of five back issues and five coming issues as fast as they are off the press. Ten months for \$1. If you have never read H-T-T you are missing something. Send today. Hunter-Trader-Trapper, Subscription Department, Columbus, Ohio. 11

A GREAT newspaper has given us ammunition for self-defense. If you regret our threatened disarmament, as so many thousands have written me, ship a stamp. The House O' Shift, North Woodstock, N. H. 3-29

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GUN REPAIRING OF ALL KINDS—Restocking Springfields. Largest stock of new guns and ammunition in America. Send 25 cents in stamps for 128-page illustrated arms catalogue. A. F. Stoeger, Inc., 509 Fifth Ave., New York, N. Y. 3-29

SALE OR TRADE—Beautiful Polar Bear skin, tanned, perfect; 44-40 New Service Colt with pearl stocks, perfect; 40-70 set trigger Winchester S. S. tools and shells. Elmer Keith, Durkee, Oreg. 3-29

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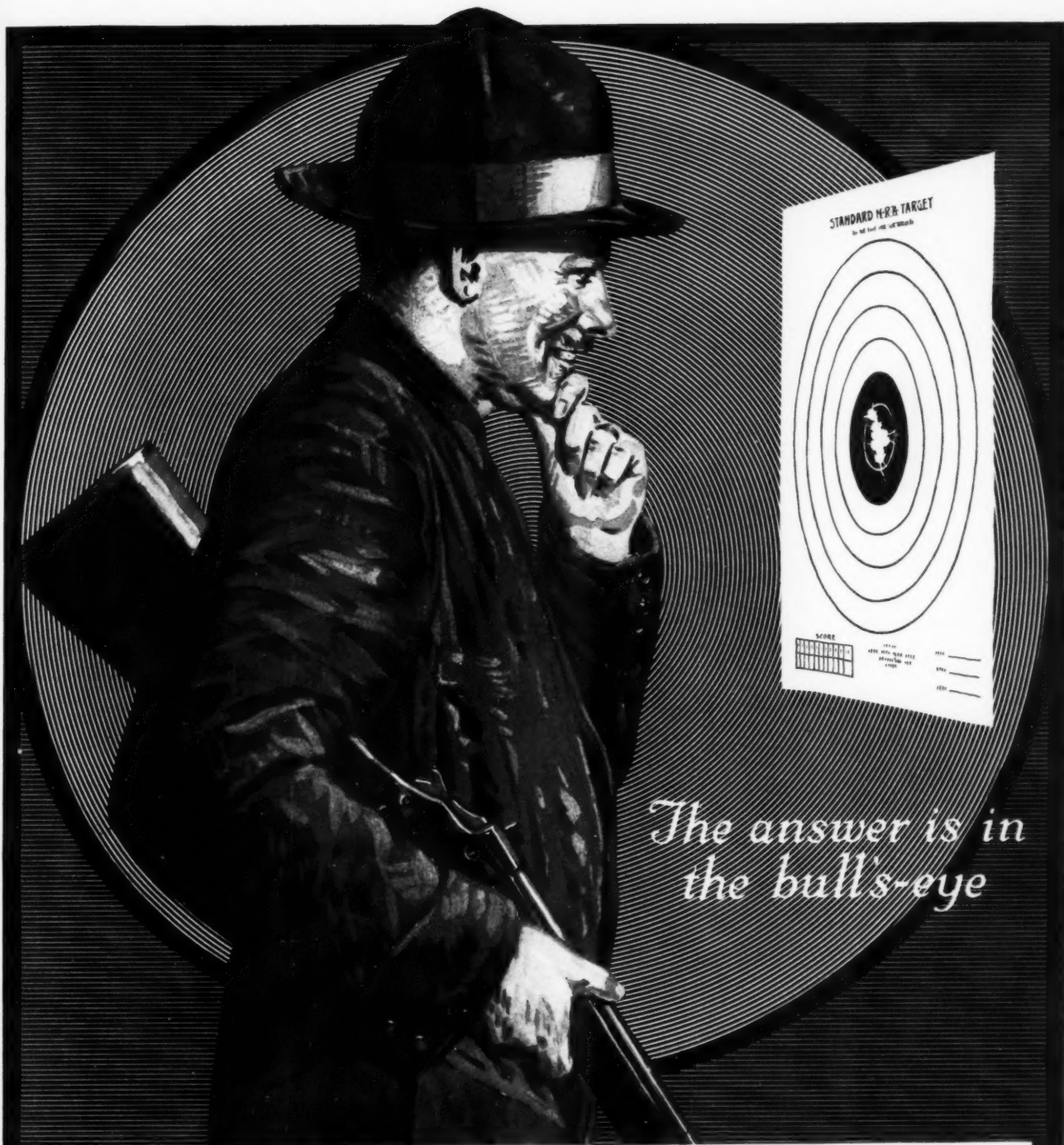
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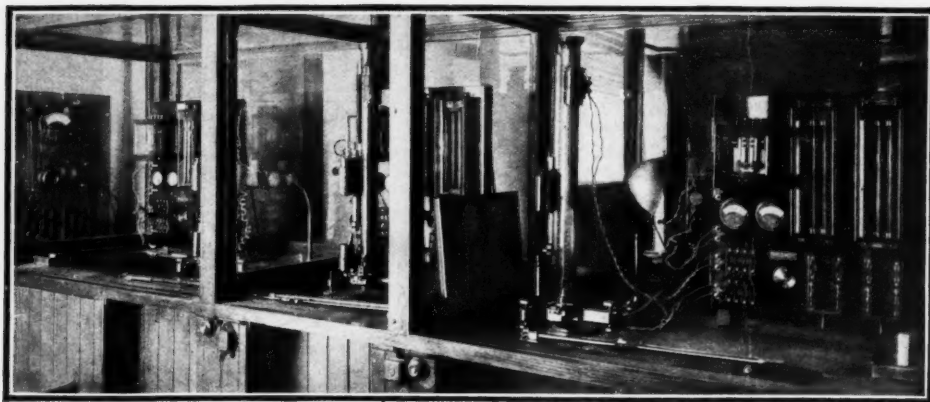
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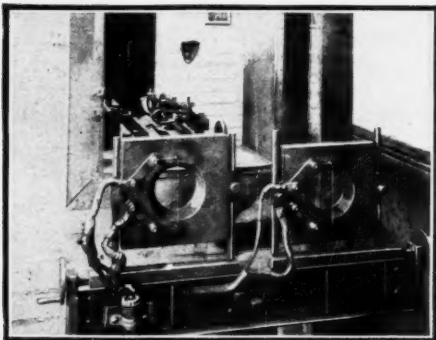
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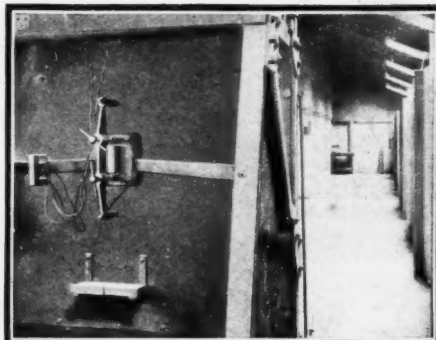
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Battery of Chronographs—the instruments that measure velocity



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EVERY lot of smokeless powder which du Pont makes and the ammunition companies load must develop the same high standard of velocity. In order to insure this uniformity, batches of powder are taken out of the mills and sent to the laboratories of the du Pont Company, where they are subjected to ballistic tests.

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Every lot of smokeless shotgun powder must develop the same velocity as preceding lots, thus

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Du Pont powders are used by all of the principal ammunition manufacturers. They have selected du Pont powder because its ballistic qualities contribute so largely to the superiority of the ammunition, and the consequent success of its users. To maintain these standards of excellence, the ammunition companies will continue to load those powders ensuring the best ammunition possible for a specified purpose.

The du Pont Company with its experience of 126 years and its present resources can supply to ammunition companies the type and quality of powders required to maintain the reputation of ammunition manufacturers and the confidence of the shooters.



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